

CRPL-F221 PART A

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JAN 31 1963

PART A
IONOSPHERIC DATA

ISSUED
JANUARY 1963

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

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IONOSPHERIC DATA

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IONOSPHERIC DATA

The CRPL-F series bulletins are issued as part of the responsibility of the Central Radio Propagation Laboratory for the exchange and dissemination of ionospheric and related geophysical data. While originally a by-product of the collection of data by the CRPL for use in radio propagation studies, the CRPL-F series bulletins, Part A, "Ionospheric Data," and Part B, "Solar-Geophysical Data," have provided useful service by collecting and making available a wide variety of data in convenient form for use in research, not only on radio propagation and the ionosphere, but also on a wide variety of geophysical problems.

The current form of the tables of ionospheric data provides the monthly medians and, in addition, the number of values entering into median determination (count) for all ionospheric characteristics listed. Also, the upper and lower quartile values, indicated by UQ and LQ in the tables, are listed for foF2, h'F2, h'F, and M(3000)F2. Quartile values are not listed for the other characteristics because of space limitations. The tables are prepared by IBM machine methods, which, by improving the speed and efficiency of preparation, permit earlier publication of the data.

Beginning with this issue, CRPL-F221, Part A, "Ionospheric Data," the hourly median values for the graphs of critical frequencies and M(3000)F2 are plotted by machine methods instead of manually, as heretofore. Graphs of critical frequencies and M(3000)F2 will continue to appear. Graphs of percentage of time of occurrence for fEs and virtual heights of the regular ionospheric layers are no longer included. This change was necessary to provide space for the enlarged tables. Data on percentage of time of occurrence of fEs above 3, 5, and 7 Mc are still available from the CRPL and the IGY World Data Center A for Airglow and Ionosphere.

For many years, the tables of ionospheric data appearing in the F series, Part A, listed values of medians recomputed at CRPL. While this practice enforced a certain uniformity, it was subject to some valid criticism for tampering with original data. The tables and graphs now show the ionospheric data just as they are provided by the originating laboratory. Responsibility for the accuracy and reliability of the data now rests entirely with the originator.

Gaps in the tables when data normally might be expected indicate the data were not provided by the originator. Following the recommendation of the World-Wide Soundings Committee, only values of median foEs are listed. In the few cases where fEs is still reported instead of foEs, the data will not be printed. Data will appear in the F series, Part A, only when the complete daily-hourly tabulations have been received by the CRPL or the IGY World Data Center A for Airglow and Ionosphere.

Information on symbols, terminology, and conventions may be found in the "URSI Handbook of Ionogram Interpretation and Reduction, of the World-Wide Soundings Committee," edited by W. R. Piggott and K. Rawer (Elsevier, 1961), which supersedes previous documents. A list of symbols is available from CRPL on request.

The following table contains the latest available information on smoothed observed Zurich sunspot numbers, beginning with the minimum of April 1954. Final numbers are listed through June 1961, the succeeding values being based on provisional data.

Smoothed Observed Zurich Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40	46	55	64	73	81
1956	89	98	109	119	127	137	146	150	151	156	160	164
1957	170	172	174	181	186	188	191	194	197	200	201	200
1958	199	201	201	197	191	187	185	185	184	182	181	180
1959	179	177	174	169	165	161	156	151	146	141	137	132
1960	129	125	122	120	117	114	109	102	98	93	88	84
1961	80	75	69	64	60	56	53	52	52	51	50	48
1962	44	41	39	38	38	37						

Units of Ionospheric Data Tables

foF2, foEs - - - Tenths of a megacycle
 foF1, FoE - - - Hundredths of a megacycle
 h'F2, h'F, h'E - Kilometers
 (M3000)F2 - - - Hundredths

NOTE: Occasionally, when the median falls between two of the observed values, the median is carried an extra decimal place beyond these units. Those cases are easily identifiable by the extra digit appearing to the right of the number, in a column usually left blank.

MED - Median
 CNT - Count
 UQ - Upper Quartile
 LQ - Lower Quartile

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 100 and figures 1 to 100 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Central African Institute for Scientific Research:
Lwiro, Congo

Meteorological Service of Congo:
Leopoldville, Congo

Republica Argentina, Ministerio de Marina:
Trelew, Argentina

Meteorological Service, Province of Macau, Asia:
Macau

Commonwealth of Australia, Ionospheric Prediction Service of the
Commonwealth Observatory:
Brisbane, Australia
Canberra, Australia
Hobart, Tasmania
Townsville, Australia
Wilkes Station, Antarctica

Australian Department of National Development, Bureau of Mineral
Resources, Geology and Geophysics:
Mundaring, Western Australia

University of Graz:
Graz, Austria

Belgian Royal Meteorological Institute:
Dourbes, Belgium

Electronics Directorate of the Brazilian Navy:
Natal, Brazil

Escola Politecnica, University of Sao Paulo:
Sao Paulo, Brazil

British Department of Scientific and Industrial Research, Radio
Research Board:

Falkland Is.
Ibadan, Nigeria (University College of Ibadan)
Inverness, Scotland
Port Lockroy
Singapore, British Malaya
Slough, England

Defence Research Board, Canada:
Churchill, Canada

Universidad de Concepcion:
Concepcion, Chile

Radio Wave Research Laboratories, National Taiwan University, Taipeh,
Formosa, China:
Formosa, China

Czechoslovak Academy of Sciences:
Pruhonice, Czechoslovakia

General Direction of Posts and Telegraphs, Helsinki, Finland:
Nurmijarvi, Finland

The Finnish Academy of Sciences and Letters:
Sodankyla, Finland

Ionospheric Research Group (GRI), France:
Dakar, French West Africa
Djibouti, French Somaliland
Tahiti, Society Is.
Tananarive, Madagascar

Heinrich Hertz Institute, German Academy of Sciences, Berlin:
Juliusruh/Rugen, Germany

Institute for Ionospheric Research, Lindau Uber Northeim, Hannover,
Germany:
Lindau/Harz, Germany
Tsumeb, South West Africa

Indian Council of Scientific and Industrial Research, Radio Research
Committee, New Delhi, India:
Ahmedabad (Physical Research Laboratory)

National Institute of Geophysics, City University, Rome, Italy:
Rome, Italy

Ministry of Posts and Telecommunications, Radio Research Laboratories,
Tokyo, Japan:
Akita, Japan
Tokyo (Kokubunji), Japan
Wakkanai, Japan
Yamagawa, Japan

Norwegian Defence Research Establishment, Kjeller per Lillestrom,
Norway:
Tromso, Norway

Institute of Telecommunication, Warsaw, Poland:
Warsaw, Poland

Research Institute of National Defence, Stockholm, Sweden:
Kiruna, Sweden
Lycksele, Sweden
Uppsala, Sweden

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
Lulea, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Sottens, Switzerland

United States Army Signal Corps:
Adak, Alaska
Ft. Monmouth, New Jersey
Grand Bahama I.
White Sands, New Mexico

National Bureau of Standards (Central Radio Propagation Laboratory):
Anchorage, Alaska
Pole Station, Antarctica

TABLES OF IONOSPHERIC DATA

March 1962 - June 1959

TABLE 2

LULEÅ, SWEDEN (65°48N, 22°1E)																									TIME 15:00			
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
f _o F ₂	28	21	18	19	23	30	36	43	48	51	54	56	57	59	59	59	58	56	50	48	44	41	33	28				
M3000F ₂	2.8	2.4	2.2	2.4	3	6	10	13	27	27	25	27	29	28	28	27	24	23	16	12	6	6	4	3				
h'F ₂													525	400	320	335	395	500										
M3000F ₂	3.4	3.0	3.1	3.2	3.25	2.60	2.65	2.45	2.40	2.35	2.30	2.25	2.25	2.35	2.35	2.40	2.40	2.45	2.45	2.45	4.45	3.60	4.85	3.00				
f _o F ₁													27	25	20	27	25	27	26	20	45	20	22	11				
f _o E																												
h'E																												
f _o E _s																												

SWEEP 0.065 MC TO 25.0 MC IN 5 MINUTES* AUTOMATIC.

MARCH, 1962

TABLE 4

NURMIJARVI, FINLAND (60°55N, 24°36E)																								TIME 15:00			
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
f _o F ₂	26	24	25	25	21	27	23	36	45	52	55	57	59	62	61	62	61	58	56	52	50	37					
h'F ₂	280	240	240	240	240	260	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270			
M3000F ₂	3.0	2.8	2.8	2.8	2.8	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2			
f _o F ₁																											
f _o E																											
h'E																											
f _o E _s																											

SWEEP 1.0 MC TO 25.0 MC IN 1 MINUTE.

MARCH, 1962

TABLE 1

KIRUNA, SWEDEN (67°48'N, 20°41'E)																								TIME 15:00			
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
f _o F ₂	MED UN	25 2	22 6	25 6	26 9	28 13	34 19	40 26	47 30	49 30	53 30	54 30	55 29	57 28	56 29	57 28	54 27	53 24	48 16	42 5	35 4	27 5	30 4	33			
h'F ₂	MED LO								465 4	300 12	275 19	265 20	260 23	270 24	260 26	255 18	250 16	250 15	250 15								
h'F	MED LO	310 11	305 14	305 17	300 16	300 18	275 20	255 26	240 48	230 50	230 50	210 49	210 47	215 48	220 46	225 26	235 27	240 27	245 25	245 21	250 21	255 17	265 16	260 13			
M3000F ₂	MED LO	2.0 2	2.0 5	2.0 5	3.0 11	3.0 19	3.0 26	3.0 30	3.0 30	3.0 30	3.0 30	3.0 30	3.0 29	3.0 29	3.0 28	3.0 26	3.0 27	3.0 22	3.0 16	3.0 9	3.0 5	3.0 3	2.0 2	2.0			
f _o F ₁	MED CUT								345 4	365 10	375 20	380 17	380 21	360 19	360 10	350 4											
f _o E	MED CUT				150 1	160 4	240 18	240 24	245 28	250 24	250 24	250 24	270 28	270 28	250 26	250 26	240 28	240 18	240 16								
h'E	MED CUT						110 2	110 9	110 11	110 13	110 16	110 15	110 15	110 15	110 11	110 6	110 2										
f _o E _s	MED CUT	40 14	30 12	35 10	30 11	34 7	24 11	20 7	270 14	260 7	260 27	260 27	260 27	260 27	260 28	260 28	260 27	260 27	260 27	260 27	260 27	260 27	260 27	260 27			

SWEEP 0.4 MC TO 15.0 MC IN 30 SECONDS*

MARCH, 1962

TABLE 3

LYCKSELE, SWEDEN (64°7N, 16°48E)																								TIME 15:00			
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
f _o F ₂	MED CNT	25 28	22 28	19 29	18 29	20 28	23 31	23 29	30 31	31 31	31 31	31 31	31 31	31 31	30 30	30 30	31 31	31 31	29 30	31 31	29 30	31 29	30 29	26			
h'F ₂	U																										
M3000F ₂	U																										
f _o F ₁	MED CNT	285 29	290 28	280 29	285 28	285 29	260 26	250 29	235 30	235 31	235 31	235 31	235 31	235 31	210 29	210 30	230 31	235 30	235 30	235 28	235 28	240 28	250 29	270 23			
f _o E	U																										
h'E	U																										
f _o E _s	U																										

SWEEP 0.33 MC TO 20.0 MC IN 3 MINUTES*

MARCH, 1962

TABLE 9

PRONUNICE, CZECHOSLOVAKIA 150°-154°E

GRAZ, AUSTRIA 147°-149°E

TIME 15:00E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f _o F2	MEQ	34	36	35	35	31	32	27	27	26	23	20	23	24	25	25	24	23	23	20	18	15	12	10
h _o F	MEQ	27	28	28	28	27	27	26	23	20	23	20	23	24	25	25	24	23	23	20	18	15	12	10
h _o F2	MEQ	28	27	26	26	26	27	27	26	23	20	23	20	23	24	25	25	24	23	20	18	15	12	10
h _o F	MEQ	28	27	26	26	26	27	27	26	23	20	23	20	23	24	25	25	24	23	20	18	15	12	10
M3000F2	MEQ	28	27	26	26	26	27	27	26	23	20	23	20	23	24	25	25	24	23	20	18	15	12	10
h _o F1	MEQ	28	27	26	26	26	27	27	26	23	20	23	20	23	24	25	25	24	23	20	18	15	12	10
h _o E	MEQ	28	27	26	26	26	27	27	26	23	20	23	20	23	24	25	25	24	23	20	18	15	12	10
h _o E	MEQ	28	27	26	26	26	27	27	26	23	20	23	20	23	24	25	25	24	23	20	18	15	12	10
h _o E	MEQ	28	27	26	26	26	27	27	26	23	20	23	20	23	24	25	25	24	23	20	18	15	12	10
h _o E	MEQ	28	27	26	26	26	27	27	26	23	20	23	20	23	24	25	25	24	23	20	18	15	12	10

SWEEP 14.0 MC TO 18.0 MC.

MARCH 1964

TABLE 10

AKASAKI, JAPAN

150°-154°E

TIME 15:00E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f _o F2	MEQ	46	45	46	45	43	41	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
h _o F	MEQ	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
M3000F2	MEQ	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
h _o F1	MEQ	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
h _o E	MEQ	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
h _o E	MEQ	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

SWEEP 14.0 MC TO 18.0 MC IN 1 MINUTE.

MARCH 1964

TABLE 10

GRAZ, AUSTRIA

147°-149°E

TIME 15:00E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f _o F2	MEQ	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
h _o F	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
M3000F2	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
h _o F1	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
h _o E	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
h _o E	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29

SWEEP 24.0 MC TO 33.0 MC IN 50 SECONDS.

MARCH 1964

TABLE 12

AKASAKI, JAPAN

150°-154°E

TIME 15:00E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f _o F2	MEQ	45	44	45	44	40	38	50	66	74	81	90	96	96	92	84	76	74	74	74	74	74	74	74
h _o F	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
M3000F2	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
h _o F1	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
h _o E	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
h _o E	MEQ	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29

SWEEP 14.0 MC TO 33.0 MC IN 50 SECONDS.

MARCH 1964

TABLE 14

131+2N+130+6E1

YAMAGUCHI, JAPAN

TIME 135+0E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f _o F ₂	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4
h'F ₂	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
h'F	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
M3000F ₂	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
f _o F ₁	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1
f _o E	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
h'E	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
f _o E _s	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1

MARCH, 1962

SWEET 1.0 MC TO 20.0 MC IN 30 SECONDS

TABLE 13

135+7N+130+2E1

TOYO, JAPAN

TIME 135+0E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f _o F ₂	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5
h'F ₂	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
h'F	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
M3000F ₂	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
f _o F ₁	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1
f _o E	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
h'E	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
f _o E _s	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1

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SWEET 1.0 MC TO 20.0 MC IN 30 SECONDS

TABLE 15

127+5N+132+9E3

BRISBANE, AUSTRALIA

TIME 130+0E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f _o F ₂	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7
h'F ₂	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
h'F	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
M3000F ₂	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
f _o F ₁	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1
f _o E	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
h'E	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
f _o E _s	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1

MARCH, 1962

SWEET 1.0 MC TO 10.0 MC IN 1 MINUTE 55 SECONDS

TABLE 16

125+0N+141+5E1

FORMOSA, CHINA

TIME 140+0E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f _o F ₂	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5
h'F ₂	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
h'F	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
M3000F ₂	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
f _o F ₁	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1
f _o E	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
h'E	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
f _o E _s	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1

MARCH, 1962

SWEET 1.0 MC TO 25.0 MC IN 27 SECONDS

TABLE 26

(57-64N) 64-67N)

(57-64N) 64-67N)

[illegible]

SWEET 0.67 MC TO 25.0 MC IN 5 MINUTES. AUTOMATIC.

TABLE 28

(50.1N. 4.6E)

(50.1N. 4.6E)

[illegible]

TABLE 2:

		1972-73																							
		UPPSALA* SWEDEN																							
HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MED	1.9	1.8	1.6	1.5	1.5	1.7	2.6	7.4	5.5	5.0	5.2	5.4	5.3	5.2	5.3	5.6	5.1	4.0	2.2	2.6	2.3	1.9	2.4	2.4
	Q	2.7	2.6	2.7	2.8	2.6	2.8	2.8	2.6	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	LO	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
h'F2	MED												2.90	2.70	2.90	2.65									
	Q												2.90	2.70	2.90	2.65									
	LO												2.90	2.70	2.90	2.65									
h'F	MED	2.95	2.95	2.70	2.78	2.60	2.65	2.55	2.40	2.15	2.10	2.10	2.10	2.10	2.10	2.15	2.15	2.15	2.10	2.10	2.20	2.25	2.70	2.75	2.65
	Q	2.8	2.7	2.8	2.9	2.8	2.8	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	LO																								
M3000X1F2	MED	2.70	2.70	2.70	2.75	2.75	2.80	2.90	3.10	3.30	3.40	3.40	3.40	3.40	3.30	3.30	3.30	3.16	3.30	3.20	3.10	2.90	2.80	2.80	2.75
	Q	2.7	2.6	2.7	2.8	2.8	2.8	2.8	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
	LO																								
f6F1	MED												3.60	3.60	3.60	3.60									
	Q												3.60	3.60	3.60	3.60									
	LO												3.60	3.60	3.60	3.60									
f6E	MED												2.30	2.50	2.40	2.50	1.85	1.25							
	Q												2.30	2.50	2.40	2.50	1.85	1.25							
	LO												2.30	2.50	2.40	2.50	1.85	1.25							
h'E	MED	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.6	2.8	2.7	2.6	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.3	2.3	2.3	2.3	2.3
	Q	2.3	2.3			2.3	2.3	2.2	2.6	2.8	2.7	2.6	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.3	2.3	2.3	2.3	2.3
	LO																								

TABLE 27

— 30 —

— 30 —

[illegible]

DATE, LOCATION		DATE, TIME																							
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6 F2	MED	24	23	22	22	20	3.0	2.4	3.9	6.0	5.6	7.0	7.0	6.4	6.8	6.9	6.8	5.7	5.0	4.5	2.4	2.4	2.4	2.4	2.4
	CNT	35	35	35	35	34	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
	LO	24	23	22	22	20	2.4	2.4	3.9	6.0	5.6	7.0	7.0	6.4	6.8	6.9	6.8	5.7	5.1	4.0	3.8	3.6	3.1	3.0	2.7
h' F2	MED																								
	CNT																								
	LO																								
h' F	MED																								
	CNT																								
	LO																								
M13000/F2	MED																								
	CNT																								
	LO																								
f6 F1	MED																								
	CNT																								
	LO																								
f6 E	MED																								
	CNT																								
	LO																								
h' E	MED																								
	CNT																								
	LO																								
f6 E1	MED	28	28	28	28	28	28	28	28	28	28	31	31	30	30	32	31	31	30	29	28	27	26	28	28
	CNT	28	28	28	28	28	28	28	28	28	28	31	31	30	30	32	31	31	30	29	28	27	26	28	28
	LO	28	28	28	28	28	28	28	28	28	28	31	31	30	30	32	31	31	30	29	28	27	26	28	28

SWEEP 2.0 MC TO 13.0 MC IN 50 SECONDS.

[illegible]

		1400-08h, 04-12h																TIME 13-00h								
MOOR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
f6 F2	MED	215	24	31	16					285	285	310	355	285	27	20	275									
	CNT	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
	LO																									
h' F2	MED									1	1	4	5	5	270	4	4									
	CNT																									
	LO																									
h' F	MED	285	285	280	260	280	275	270	250	430	325	215	215	215	215	220	240	210	230	425	220	230	235	250	270	275
	CNT	20	20	20	20	20	20	27	27	28	28	28	28	28	27	28	27	27	28	28	28	27	28	28	27	
	LO																									
M3000F2	MED	295	300	295	295	295	300	310	315	350	355	350	345	340	450	350	340	350	360	345	320	320	310	305	295	
	CNT	27	27	27	28	28	27	24	25	42	40	18	20	23	23	24	24	24	24	22	23	24	26	26	25	
	LO																									
f6 F1	MED									1	1	4	5	4	3	3										
	CNT																									
	LO																									
f6 E	MED									230	270	280	490	490	280	270	250	620								
	CNT									22	23	26	24	24	23	22	23	12								
	LO																									
h' E	MED									120	110	110	110	110	110	115	120									
	CNT									24	23	26	26	25	25	24	27	15								
	LO																									
f6 Ea	MED									E	G	G	G	G	G	G	G	215	E			E	E	E	E	E
	CNT	20	20	20	20	20	27	28	28	28	28	26	28	28	28	27	28	28	28	28	28	28	28	28	28	
	LO																									

MEEP 1.0 MC TO 25.0 MC IN 30 SECONDS.

ROME - ITALY				141+BN, 12+SE										TIME 15:00										
hour	DO	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6f2	MEQ	25	34	36	34	34	33	36	41	40	39	72	75	70	98	97	70	69	76	44	40	37	35	34
	CNT	23	23	29	24	24	25	25	24	26	29	23	27	28	24	24	23	18	22	16	16	16	19	26
	UD	37	37	36	37	37	34	33	46	47	74	75	78	80	81	78	80	76	73	61	58	47	40	39
	LO	30	32	33	33	32	31	27	36	37	64	64	66	67	66	62	62	66	57	41	34	37	35	32
h'f2	MEQ										1				1									
	CNT																							
	UD																							
	LO																							
h'f	MEQ	290	240	210	240	270	250	260	240	230	220	210	220	220	220	230	240	430	230	290	250	250	260	250
	CNT	360	330	300	300	290	270	250	250	240	230	230	230	240	230	240	250	240	240	260	250	300	310	
	UD	270	270	260	260	260	250	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	
	LO	260	250	240	240	240	230	220	220	210	210	210	210	210	200	210	220	220	210	240	240	250	270	
MDG00IF2	MEQ	295	270	270	285	290	300	305	320	345	340	335	335	335	340	325	340	335	325	345	320	320	305	285
	CNT	305	300	300	310	305	305	310	315	320	315	310	310	310	310	305	310	310	305	310	305	305	310	300
	UD	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
	LO	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
f6f1	MEQ										1				1									
	CNT																							
	UD																							
	LO																							
f6E	MEQ	220	240	240	240	270	250	260	240	230	220	210					240	400						
	CNT																							
	UD																							
	LO																							
h'E	MEQ																							
	CNT																							
	UD																							
	LO																							
f6En	MEQ	26	24	26	24	26	24	26	27	27	270	25	27	28	28	28	25	26	26	25	26	24	26	27
	CNT																							
	UD																							
	LO																							

[illegible]

TABLE 41
PUNJABINGA W. AUSTRALIA
(132.05°, 110.2E)

TIME 14.00E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fF2	MEO CNT UD	42 20 42	42 24 40	37 25 37	34 26 34	32 27 32	30 27 27	31 27 26	26 23 22	26 22 24	66 66 68	72 74 77	71 71 71	74 70 67	84 84 84	66 58 46	58 46 44	13 14 17	22 22 22	15 15 15	13 14 17	22 22 22	23	
hF2	MEO CNT UD	42 20 42	42 24 40	37 25 37	34 26 34	32 27 32	30 27 27	31 27 26	26 23 22	26 22 24	66 66 68	72 74 77	71 71 71	74 70 67	84 84 84	66 58 46	58 46 44	13 14 17	22 22 22	15 15 15	13 14 17	22 22 22	23	
hF	MEO CNT UD	42 20 42	42 24 40	37 25 37	34 26 34	32 27 32	30 27 27	31 27 26	26 23 22	26 22 24	66 66 68	72 74 77	71 71 71	74 70 67	84 84 84	66 58 46	58 46 44	13 14 17	22 22 22	15 15 15	13 14 17	22 22 22	23	
M3000F2	MEO CNT UD	300 19 300	300 23 305	310 24 310	310 26 310	320 26 320	330 26 330	340 26 340	350 26 350	360 26 360	370 26 370	380 26 380	390 26 390	400 26 400	410 26 410	420 26 420	430 26 430	440 26 440	450 26 450	460 26 460	470 26 470	480 26 480	490 26 490	500 26 500
fF1	MEO CNT	42 10	42 16	40 16	37 16	34 16	32 16	30 16	26 16	26 16	66 16	72 16	71 16	74 16	84 16	66 16	58 16	13 16	22 16	15 16	13 16	22 16	23	
fE	MEO CNT	42 18	42 23	40 18	37 18	34 18	32 18	30 18	26 18	26 18	66 18	72 18	71 18	74 18	84 18	66 18	58 18	13 18	22 18	15 18	13 18	22 18	23	
hE	MEO CNT	42 18	42 23	40 18	37 18	34 18	32 18	30 18	26 18	26 18	66 18	72 18	71 18	74 18	84 18	66 18	58 18	13 18	22 18	15 18	13 18	22 18	23	
fEa	MEO CNT	42 18	42 23	40 18	37 18	34 18	32 18	30 18	26 18	26 18	66 18	72 18	71 18	74 18	84 18	66 18	58 18	13 18	22 18	15 18	13 18	22 18	23	

SWEEP 1.0 MC TO 20.0 MC IN 10 SECONDS.

FEBRUARY, 1962

TABLE 42
CANBERRA, AUSTRALIA
(135.35°, 144.0E)

TIME 130.0E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fF2	51	48	46	39	26	31	42	52	54	60	65	67	67	66	69	69	71	66	63	64	60	60	56	58
hF2	51	48	46	39	26	31	42	52	54	60	65	67	67	66	69	69	71	66	63	64	60	60	56	58
hF	51	48	46	39	26	31	42	52	54	60	65	67	67	66	69	69	71	66	63	64	60	60	56	58
M3000F2	285	310	320	310	300	305	340	330	325	310	310	310	310	310	310	310	320	325	325	340	300	290	285	290
fF1	51	48	46	39	26	31	42	52	54	60	65	67	67	66	69	69	71	66	63	64	60	60	56	58
fE	51	48	46	39	26	31	42	52	54	60	65	67	67	66	69	69	71	66	63	64	60	60	56	58
hF	51	48	46	39	26	31	42	52	54	60	65	67	67	66	69	69	71	66	63	64	60	60	56	58
fEa	51	48	46	39	26	31	42	52	54	60	65	67	67	66	69	69	71	66	63	64	60	60	56	58

SWEEP 1.0 MC TO 20.0 MC IN 30 SECONDS.

FEBRUARY, 1962

TABLE 43
HOBART, TASMANIA
(142.95°, 147.2E)

TIME 150.0E

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fF2	47	44	39	35	32	29	40	50	60	57	44	66	66	65	64	66	62	64	64	62	65	55	50	46
hF2	47	44	39	35	32	29	40	50	60	57	44	66	66	65	64	66	62	64	64	62	65	55	50	46
hF	47	44	39	35	32	29	40	50	60	57	44	66	66	65	64	66	62	64	64	62	65	55	50	46
M3000F2	315	310	310	315	315	310	355	350	350	345	340	340	330	345	335	340	340	330	330	335	330	305	305	305
fF1	47	44	39	35	32	29	40	50	60	57	44	66	66	65	64	66	62	64	64	62	65	55	50	46
fE	47	44	39	35	32	29	40	50	60	57	44	66	66	65	64	66	62	64	64	62	65	55	50	46
hF	47	44	39	35	32	29	40	50	60	57	44	66	66	65	64	66	62	64	64	62	65	55	50	46
fEa	47	44	39	35	32	29	40	50	60	57	44	66	66	65	64	66	62	64	64	62	65	55	50	46

SWEEP 1.0 MC TO 18.0 MC IN 1 MINUTE 55 SECONDS.

FEBRUARY, 1962

TABLE 44
FALKLAND IS.
(131.75°, 57.8W)

TIME 00.00

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fF2	54	64	64	54	55	55	61	61	64	79	81	75	77	74	68	66	66	66	71	70	70	69	66	66
hF2	54	64	64	54	55	55	61	61	64	79	81	75	77	74	68	66	66	66	71	70	70	69	66	66
hF	54	64	64	54	55	55	61	61	64	79	81	75	77	74	68	66	66	66	71	70	70	69	66	66
M3000F2	285	280	285	290	290	290	320	315	300	300	300	310	310	320	320	315	330	325	320	340	305	305	300	300
fF1	54	64	64	54	55	55	61	61	64	79	81	75	77	74	68	66	66	66	71	70	70	69	66	66
fE	54	64	64	54	55	55	61	61	64	79	81	75	77	74	68	66	66	66	71	70	70	69	66	66
hF	54	64	64	54	55	55	61	61	64	79	81	75	77	74	68	66	66	66	71	70	70	69	66	66
fEa	54	64	64	54	55	55	61	61	64	79	81	75	77	74	68	66	66	66	71	70	70	69	66	66

SWEEP 0.67 MC TO 4.5 MC IN 5 MINUTES, AUTOMATIC.

FEBRUARY, 1962

TABLE 40

(167 BN, 20+4E)

KIRUNA, SWEDEN

TIME 15:00

TABLE 45

(169 TN, 19+0E)

TROMSØ, NORWAY

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16F2	MED CNT UQ LO	7 4	24 11	43 12	24 13	20 18	14 17	18 10	20 10	24 42	40 31	46 31	50 31	47 30	46 29	37 46	31 24	24 18	7 6	5 3	4 3	5 4	5 4	5
16F2	MED CNT UQ LO																							
16F	MED CNT UQ LO	310 10	310 16	310 17	295 19	290 18	285 13	280 6	245 17	220 31	210 31	210 31	210 31	210 30	210 27	220 25	240 19	270 10	285 4	300 5	300 7	300 11	310 15	310
M13000IF2	MED CNT UQ LO	295 4	300 11	300 10	300 12	300 16	300 15	320 10	320 6	340 22	350 29	350 31	350 29	350 30	340 25	340 24	330 17	310 7	340 5	320 3	300 3	300 4	300 4	300
16F1	MED CNT																							
16E	MED CNT																							
16E	MED CNT																							
16Ea	MED CNT	30 30	32 27	30 30	30 30	35 30	30 30	40 31	38 31	30 25	25 26	26 26	26 26	27 24	24 9	40 9	37 7	44 12	44 7	54 10	54 10	53 10	53 10	50

SWEEP 0.8 MC TO 15.0 MC IN 30 SECONDS.

JANUARY, 1962

TABLE 46

(164 TN, 18+0E)

LYCKSELE, SWEDEN

TIME 15:00

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16F2	MED CNT UQ LO	17 19	15 25	13 27	13 26	13 27	15 26	15 25	16 24	22 30	26 31	26 31	26 31	26 31	26 30	24 22	24 22	24 22	24 22	24 22	24 22	24 22	24 22	24
16F2	MED CNT UQ LO																							
16F	MED CNT UQ LO	285 8	270 13	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265 17	265
M13000IF2	MED CNT UQ LO	280 11	280 15	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280 24	280
16F1	MED CNT																							
16E	MED CNT																							
16E	MED CNT																							
16Ea	MED CNT	31 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32 30	32

SWEEP 0.43 MC TO 20.0 MC IN 3 MINUTES.

JANUARY, 1962

TABLE 47

(167 TN, 20+4E)

SOGÅN, FINLAND

TIME 15:00

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16F2	MED CNT UQ LO	20 1	16 2	16 2	27 2	22 2	15 2	14 2	24 1	34 1	40 1	45 1	52 1	54 1	54 1	54 1	54 1	54 1	54 1	54 1	54 1	54 1	54 1	54
16F2	MED CNT UQ LO																							
16F	MED CNT UQ LO	330 10	320 10	320 10	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290 24	290
M13000IF2	MED CNT UQ LO	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280 2	280
16F1	MED CNT																							
16E	MED CNT																							
16E	MED CNT																							
16Ea	MED CNT	25 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23 24	23

SWEEP 1.0 MC TO 16.0 MC IN 8 MINUTES, AUTOMATIC.

JANUARY, 1962

TIME 105-00

TABLE 83

SINGAPORE, 08-11-58 (105-00)

HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fF2	MEQ CNT LO	30 46 30	46 52 30	34 30 25	40 25 17	44 24 17	48 28 31	50 30 31	57 30 30	76 30 30	82 30 30	84 31 31	85 31 31	86 30 30	88 30 30	90 30 30	90 30 30	88 30 30	80 30 30	76 30 30	68 30 30	62 30 30	51 26 26	49	
hF2	MEQ CNT LO																								
hF	MEQ CNT LO																								
M3000F2	MEQ CNT LO	310 30 30	320 30 30	325 25 25	330 26 26	335 27 27	340 28 28	345 29 29	350 30 30	355 31 31	360 32 32	365 33 33	370 34 34	375 35 35	380 36 36	385 37 37	390 38 38	395 39 39	400 40 40	405 41 41	410 42 42	415 43 43	420 44 44	425 45 45	
fF1	MEQ CNT																								
fE	MEQ CNT	80 1	80 1	90 1	90 1	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2	115 2
hE	MEQ CNT																								
fEa	MEQ CNT	30 20	31 17	31 15	31 19	31 20	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21	31 21

SHEEP 04-07 MC TO 25-0 MC IN 5 MINUTES* AUTOMATIC.

JANUARY, 1962

TABLE 84

FALKLAND IS., 15-17-58 (105-00)

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fF2	MEQ CNT LO	66 18	65 17	64 16	66 16	62 16	64 16	66 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16	68 16
hF2	MEQ CNT LO																							
hF	MEQ CNT LO																							
M3000F2	MEQ CNT LO	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14	290 14
fF1	MEQ CNT																							
fE	MEQ CNT	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14	350 14
hE	MEQ CNT																							
fEa	MEQ CNT	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13	25 13

SHEEP 04-07 MC TO 25-0 MC IN 5 MINUTES* AUTOMATIC.

JANUARY, 1962

TABLE 85

AHMEDABAD, INDIA, 11-11-58 (105-00)

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fF2	MEQ CNT LO	33 23	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24	35 24
hF2	MEQ CNT LO																							
hF	MEQ CNT LO																							
M3000F2	MEQ CNT LO	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26	360 26
fF1	MEQ CNT	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16	370 16
fE	MEQ CNT	219 26	270 26	300 26	330 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26	340 26
hE	MEQ CNT																							
fEa	MEQ CNT	13 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19	15 19

JANUARY, 1962

SHEEP 04-07 MC TO 25-0 MC IN 5 MINUTES* AUTOMATIC.

TABLE 86

MUNDURGA, W. AUSTRALIA, 11-11-58 (105-00)

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fF2	MEQ CNT LO	47 26	43 26	40 26	37 26	35 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26	32 26
hF2	MEQ CNT LO																							
hF	MEQ CNT LO																							
M3000F2	MEQ CNT LO	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43	330 43
fF1	MEQ CNT	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15	370 15
fE	MEQ CNT	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27	250 27
hE	MEQ CNT																							
fEa	MEQ CNT	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19	25 19

JANUARY, 1962

SHEEP 04-07 MC TO 25-0 MC IN 5 MINUTES* AUTOMATIC.

TABLE 61

GRAND BARRAGE, LA

12h-00h, 7h-24h

TIME 12h-00h

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	365 40 42 43	41 385 36 47	64 71 735 735	71 71 78 77	705 45 465 37	36 45 35 37																		
UO	40 44 46 50	48 43 39 50	67 78 60 60	85 80 98 88	76 71 53 41	40 38 41 54																		
LO	3 2 38 40 39	38 36 32 44	67 68 68 68	67 68 70 72	66 59 44 32	30 31 32 33																		
hF2																								
UO																								
LO																								
hF																								
UO																								
LO																								
M3000IF2																								
UO																								
LO																								
f6FI																								
UO																								
LO																								
f6E																								
UO																								
LO																								
hE																								
UO																								
LO																								
f6Ea																								
UO																								
LO																								

SHEEP 1-0 MC TO 25-0 MC IN 13-5 SECONDS

DECEMBER 1961

TABLE 66

SUNSHINE (F) ALABAMA

161-24, 18-4, 11

TIME 150-0-0

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	365 40 42 43	41 385 36 47	64 71 735 735	71 71 78 77	705 45 465 37	36 45 35 37																		
UO	40 44 46 50	48 43 39 50	67 78 60 60	85 80 98 88	76 71 53 41	40 38 41 54																		
LO	3 2 38 40 39	38 36 32 44	67 68 68 68	67 68 70 72	66 59 44 32	30 31 32 33																		
hF2																								
UO																								
LO																								
hF																								
UO																								
LO																								
M3000IF2																								
UO																								
LO																								
f6FI																								
UO																								
LO																								
f6E																								
UO																								
LO																								
hE																								
UO																								
LO																								
f6Ea																								
UO																								
LO																								

SHEEP 1-0 MC TO 25-0 MC IN 13-5 SECONDS

NOVEMBER 1961

DAAR, FRENCH W. AFRICA

14-08h, 17-40h

TIME 150-0-0

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	50 50 45 44	42 36 48 55	72 76 85 94	102 113 140 147	149 131 130 141	87 75 64 49																		
UO	18 13 10 12	12 13 25 22	24 24 24 24	24 24 26 26	27 27 27 27	23 23 23 23																		
LO																								
hF2																								
UO																								
LO																								
hF																								
UO																								
LO																								
M3000IF2																								
UO																								
LO																								
f6FI																								
UO																								
LO																								
f6E																								
UO																								
LO																								
hE																								
UO																								
LO																								
f6Ea																								
UO																								
LO																								

SHEEP 1-0 MC TO 17-0 MC

JANUARY 1961

TABLE 11

[illegible]

JUNE • 1961

TABLE 72

HOUR		DAY																							
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MED	3.0	3.0	3.0	2.8	2.6	2.5	2.4	3.1	2.3	2.4	7.1	7.9	8.0	8.0	8.0	8.0	7.4	6.6	5.8	4.9	4.2	3.7	3.4	3.3
	CNT	2.1	2.2	2.2	1.9	2.1	2.5	2.7	2.7	2.8	2.8	2.6	2.6	2.6	2.7	2.5	2.6	2.7	2.5	2.5	2.5	2.2	2.2	2.2	
	UQ																								
	LQ																								
f6F2	MED																								
	CNT																								
	UQ																								
	LQ																								
f6F	MED	30.0	29.0	29.5	29.0	28.0	29.0	29.0	27.5	23.0	22.5	22.5	23.0	22.5	22.5	23.0	22.5	21.5	22.0	23.0	24.0	27.5	29.0	30.0	
	CNT	2.1	2.7	2.8	2.8	2.6	2.6	2.0	2.8	2.8	2.7	2.8	2.5	2.6	2.6	2.5	2.7	2.7	2.5	2.6	2.4	2.5	2.1	2.3	
	UQ																								
	LQ																								
MDC001F2	MED	27.0	26.5	26.5	26.5	27.5	27.0	28.0	29.5	33.5	33.5	33.0	33.0	22.5	33.0	33.0	33.5	34.0	33.0	32.0	33.0	30.5	29.0	28.0	
	CNT	2.0	2.0	1.9	1.5	1.8	2.4	2.4	2.6	2.7	2.7	2.5	2.5	2.3	2.6	2.4	2.4	2.5	2.4	2.5	2.4	2.4	2.0	2.1	
	UQ																								
	LQ																								
f6F1	MED																								
	CNT																								
	UQ																								
	LQ																								
f6E	MED																								
	CNT																								
	UQ																								
	LQ																								
f6E	MED																								
	CNT																								
	UQ																								
	LQ																								
f6E	MED	3.1	1.5	1.3	1.4	1.1	1.1	1.2	2.2	1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	CNT	3	7	10	10	9	8	3	3	12	160	14	12	11	12	9	11	14	7	3	2.3	4.5	22		
	UQ																				2	3	3		
	LQ																								

FEBRUARY • 1961

TABLE 63

	hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6 F2	MED	56	54.5	47	45	43.5	44	52.5	54.5	69	73	77	73	70.5	83	84	90	70.5	76	74.5	71	70.5	61.5	59.5	55.5
	QNT	21	20	22	21	21	21	23	18	15	13	15	13	12	17	17	14	13	18	18	19	16	14	14	20
	LO	64	62	53	51	47	46.5	65	70	80	84	88	88	86	86	87	84	85	88	87	76	70	64	66	50
f6 F2	MED	489	320	311	311	315	324			330	347.5	335	343.5	357.5	360	273.5									
	QNT	34	36	34	36	34	35	34	35	35	34	34	35	34	320	300									
	LO	262	290	308	292	307	311	329	312	316	316	310	300	285	265										
f6 F	MED	284	282.5	265	270	278	270	245	249	250	240	190	218	195	205	210	210	225	249	243.5	240.5	240	258	274.5	285
	QNT	21	20	22	21	21	21	18	15	13	15	13	15	12	19	17	11	14	13	10	11	10	13	10	
	LO	236	235	249	248	251	240	235	240	235	240	243	240	232	248	249	207	225	220	235	244	230	237	255	265
M3000/F2	MED	300	310	300	310	300	310	300	310	400	420	400		425	430	425	300	300	300	315	310	315	300	300	295
	QNT	18	18	19	19	18	19	22	21	11	11	15	14	15	14	17	13	17	16	17	14	20	13	18	
	LO	310	315	310	305	305	320	340	335	330	310	310	305	300	300	305	305	300	325	340	330	310	310	300	
f6 F1	MED	290	245	240	285	285	300	310	290	300	480	475	485	485	280	240	270	295	300	300	305	310	500	520	220
	QNT																								
	LO																								
f6 E	MED	27	25	19	22.5	18	25	42		43	53	47.5	55	45	44.5	38	42	41	43	44	39.5	38	34	33.5	32
	QNT	21	21	22	24	21	22	23		21	20	0	1	17	16	17	18	24	25	24	23	23	22	22	24
	LO																								
f6 E4	MED	27	25	19	22.5	18	25	42		43	53	47.5	55	45	44.5	38	42	41	43	44	39.5	38	34	33.5	32
	QNT	21	21	22	24	21	22	23		21	20	0	1	17	16	17	18	24	25	24	23	23	22	22	24
	LO																								

JUNE, 1961

TABLE 71

[illegible]

MAY • 1961

TABLE 10.5.3.1

[illegible]

WEEP 1.0 MC TO 25.0 MC IN 15 SECONDS.

MARCH, 1960

TABLE 96
(22.4N, 113.6E)[illegible]

WCEP 100 MC TO 200V M_L IN 15 JT JNL.

J. Polym. Sci. Part A: Polym. Chem.: Vol. 33, No. 1, 1995

11M2 00.00W

PORT LOCATION		10-1987																TIME DATA							
HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f0F2	MED	U	U	U	U																				
	CNT	65	64	61	58	54	53	54	56	60	67	72	74	78	76	73	71	68	82	78	84	87	76	79	70
	LO	13	11	12	11	14	14	15	20	19	20	16	16	17	16	17	17	16	14	14	15	15	14	17	11
f1F2	MED																								
	CNT																								
	LO																								
f1F	MED	300	315	220	340	320	310	250	270	255	440	440	240	240	245	240	235	240	240	250	250	250	450	260	270
	CNT	24	22	22	22	20	17	21	23	22	21	19	20	14	14	17	20	21	24	22	41	43	42	42	42
	LO																								
M13000IF2	MED	U	250	250	240	250	260	260	270	240	310	315	310	315	340	345	345	330	320	320	315	305	485	240	265
	CNT	9	7	6	6	8	10	11	18	18	14	15	15	15	14	16	16	16	14	13	13	14	13	10	8
	LO																								
f0F1	MED																								
	CNT																								
	LO																								
f0E	MED	120	160	100	140	100	140	175	190	140	445	470	450	200	425	205	350	270	250	210	190	135	115	110	
	CNT	2	1	2	2	2	3	7	9	7	13	11	10	10	3	9	13	11	10	10	12	7	1	2	
	LO																								
f1E	MED																								
	CNT																								
	LO																								
f0EA	MED	11	13	7	11	12	14	18	42	41	49	20	34	34	31	40	30	27	25	21	19	16	14	13	9
	CNT	22	43	22	22	22	22	22	43	43	230	22	23	23	22	23	23	25	26	24	23	24	22	24	18
	LO																								

SWEEP 0.07 MC TO 25.0 MC IN 5 MINUTS. AUTOMATIC.

MARCH, 1960

Concentration of inhibitor	Rate of polymerization
0.0	1.0
0.2	0.8
0.4	0.6
0.6	0.4
0.8	0.2
1.0	0.0

[illegible]

SWEEP 0.33 M-1) 2.0 MC 16 MINUTE.

$$Y = \frac{1}{2} \left(\frac{1}{2} \frac{1}{2} \frac{1}{2} \right)$$

TABLE VI
GROWTH WITH W. AFRICA
19.25, 17.75

	HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6 F2	MED	30.2	27.6	25.8	23.8	21.8	20.2	18.5	16.1	13.9	10.7	8.5	6.8	5.5	4.4	3.7	3.0	2.5	2.1	1.8	1.6	1.4	1.2	1.0	.8
	CR	27.5	25.0	23.0	21.0	19.0	17.5	15.5	13.5	11.5	9.5	7.5	6.0	5.0	4.0	3.5	3.0	2.5	2.0	1.8	1.6	1.4	1.2	1.0	.8
	LO	25.0	22.5	20.5	18.5	16.5	15.0	13.0	11.0	9.0	7.0	5.5	4.5	3.5	3.0	2.5	2.0	1.8	1.6	1.4	1.2	1.0	.8	.6	.4
f2 F2	MED	30.2	27.6	25.8	23.8	21.8	20.2	18.5	16.1	13.9	10.7	8.5	6.8	5.5	4.4	3.7	3.0	2.5	2.1	1.8	1.6	1.4	1.2	1.0	.8
	CR	27.5	25.0	23.0	21.0	19.0	17.5	15.5	13.5	11.5	9.5	7.5	6.0	5.0	4.0	3.5	3.0	2.5	2.0	1.8	1.6	1.4	1.2	1.0	.8
	LO	25.0	22.5	20.5	18.5	16.5	15.0	13.0	11.0	9.0	7.0	5.5	4.5	3.5	3.0	2.5	2.0	1.8	1.6	1.4	1.2	1.0	.8	.6	.4
f6 F	MED	25.5	23.1	20.5	18.0	15.5	13.5	11.5	9.5	7.5	5.5	4.0	3.0	2.5	2.0	1.8	1.6	1.4	1.2	1.0	.8	.6	.4	.2	.1
	CR	23.0	20.5	18.0	15.5	13.0	11.0	9.0	7.0	5.0	3.5	2.5	2.0	1.8	1.6	1.4	1.2	1.0	.8	.6	.4	.2	.1	.0	.0
	LO	20.5	18.0	15.5	13.0	10.5	8.5	6.5	4.5	3.0	2.0	1.5	1.2	1.0	.8	.6	.4	.2	.1	.0	.0	.0	.0	.0	.0
M3000F2	MED	28.3	28.3	27.0	25.0	23.1	21.5	20.0	18.5	17.0	15.5	14.0	12.5	11.0	9.5	8.0	6.5	5.0	4.0	3.0	2.0	1.0	.5	.2	.1
	CR	27.5	27.5	26.5	24.5	22.5	21.0	19.5	18.0	16.5	15.0	13.5	12.0	10.5	9.0	7.5	6.0	4.5	3.5	2.5	1.5	.5	.2	.1	.0
	LO	26.0	26.0	25.0	23.0	21.0	19.5	18.0	16.5	15.0	13.5	12.0	10.5	9.0	7.5	6.0	4.5	3.5	2.5	1.5	.5	.2	.1	.0	.0
f6 F1	MED	28.3	28.3	27.0	25.0	23.1	21.5	20.0	18.5	17.0	15.5	14.0	12.5	11.0	9.5	8.0	6.5	5.0	4.0	3.0	2.0	1.0	.5	.2	.1
	CR	27.5	27.5	26.5	24.5	22.5	21.0	19.5	18.0	16.5	15.0	13.5	12.0	10.5	9.0	7.5	6.0	4.5	3.5	2.5	1.5	.5	.2	.1	.0
	LO	26.0	26.0	25.0	23.0	21.0	19.5	18.0	16.5	15.0	13.5	12.0	10.5	9.0	7.5	6.0	4.5	3.5	2.5	1.5	.5	.2	.1	.0	.0
f6 E	MED	28.3	28.3	27.0	25.0	23.1	21.5	20.0	18.5	17.0	15.5	14.0	12.5	11.0	9.5	8.0	6.5	5.0	4.0	3.0	2.0	1.0	.5	.2	.1
	CR	27.5	27.5	26.5	24.5	22.5	21.0	19.5	18.0	16.5	15.0	13.5	12.0	10.5	9.0	7.5	6.0	4.5	3.5	2.5	1.5	.5	.2	.1	.0
	LO	26.0	26.0	25.0	23.0	21.0	19.5	18.0	16.5	15.0	13.5	12.0	10.5	9.0	7.5	6.0	4.5	3.5	2.5	1.5	.5	.2	.1	.0	.0

SWEEP 1.0 MC TO 16.0 MC IN 4 MINUTES.

JULY • 1954

TABLE 103

ACAU (22.2N, 113.0E)

	hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
fe2	med	137	175	115	110	95	81	82	82	100	120	125	140	144	150	150	155	155	151	182	157	154	156	152	157
	cat	116	113	113	118	7	6	8	13	15	15	16	6	6	14	14	14	14	15	18	17	15	14	19	11
	uo	166	174	152	150	125	160	95	100	100	110	140	130	144	150	150	152	153	150	155	150	158	155	156	160
lo	med	157	155	140	111	95	91	85	85	95	110	140	147	150	150	150	150	150	150	150	150	150	150	150	150
	cat																								
	uo																								
n'f2	med																								
	cat																								
	uo																								
n'f	med																								
	cat																								
	uo																								
m3000f2	med	215	220	220	220	205	210	205	210	210	205	205	205	205	202	205	202	205	205	205	205	205	205	205	205
	cat	16	13	13	11	8	7	6	8	15	8	6	6	9	14	21	20	23	18	17	15	14	10	10	
	uo																								
lo	med																								
	cat																								
	uo																								
fe f1	med																								
	cat																								
	uo																								
fe e	med																								
	cat																								
	uo																								
n'e	med																								
	cat																								
	uo																								
fe e4	med																								
	cat																								
	uo																								

WED. J. P. M. T. 1. M. IN 15 SECOND.

TABLE 9

TSUMEB, SOUTH W. AFRICA (1972-1973)

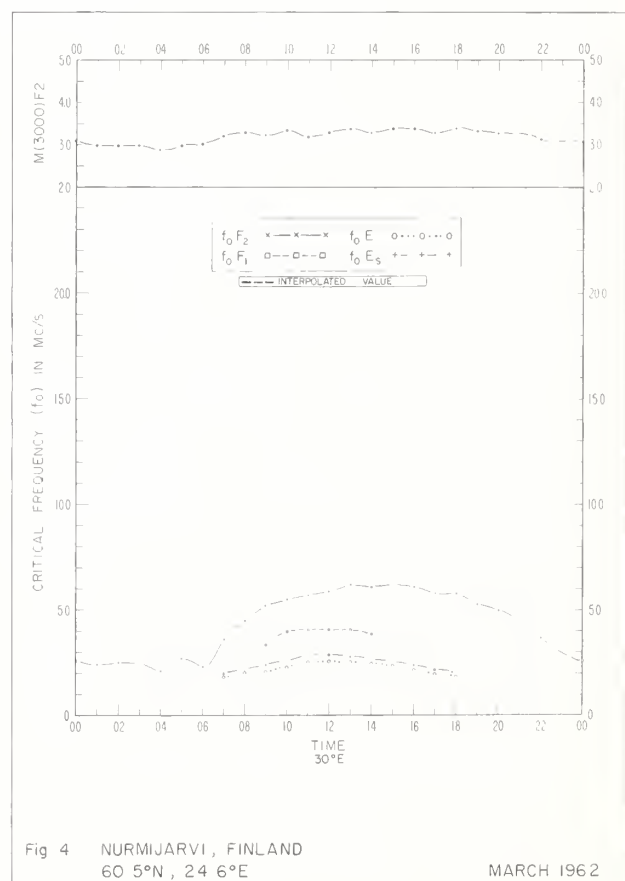
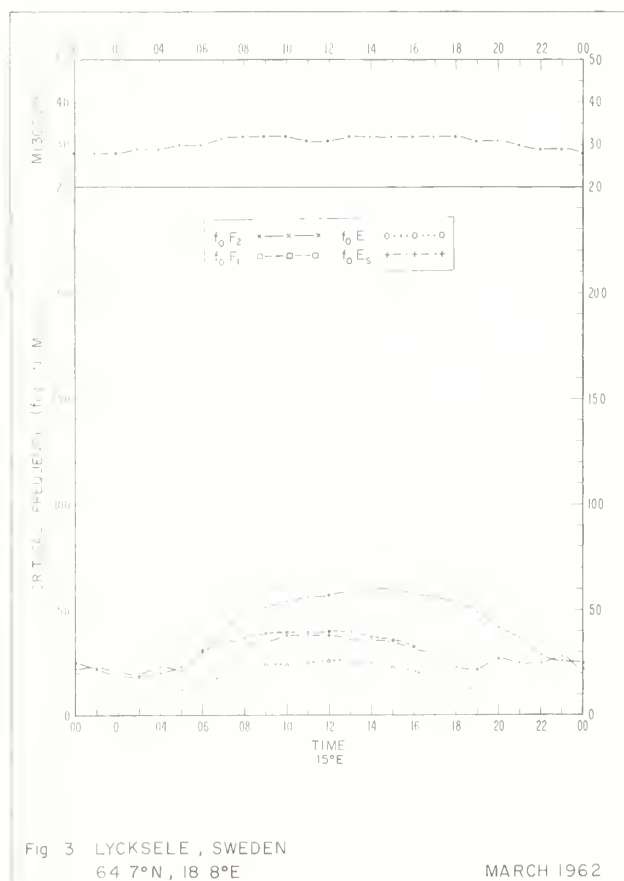
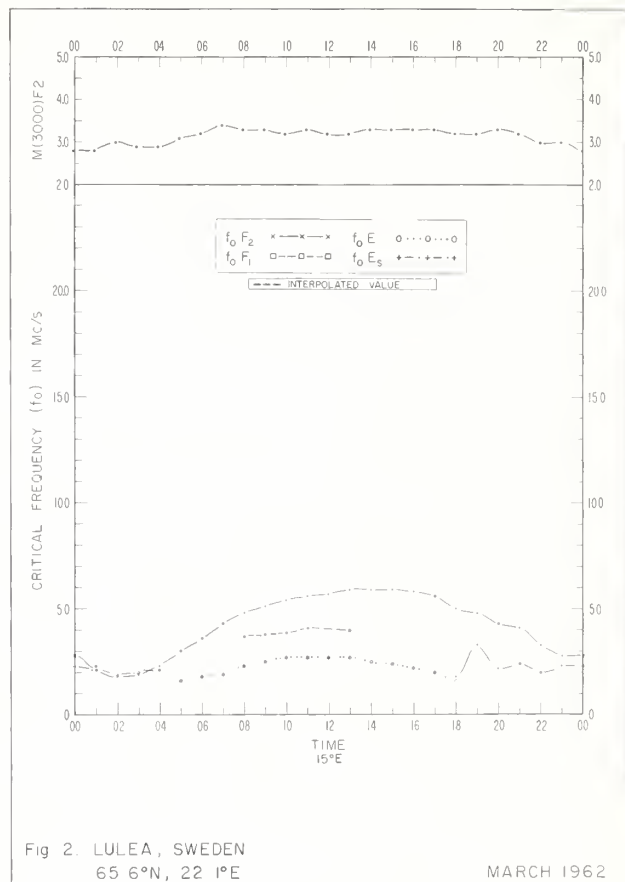
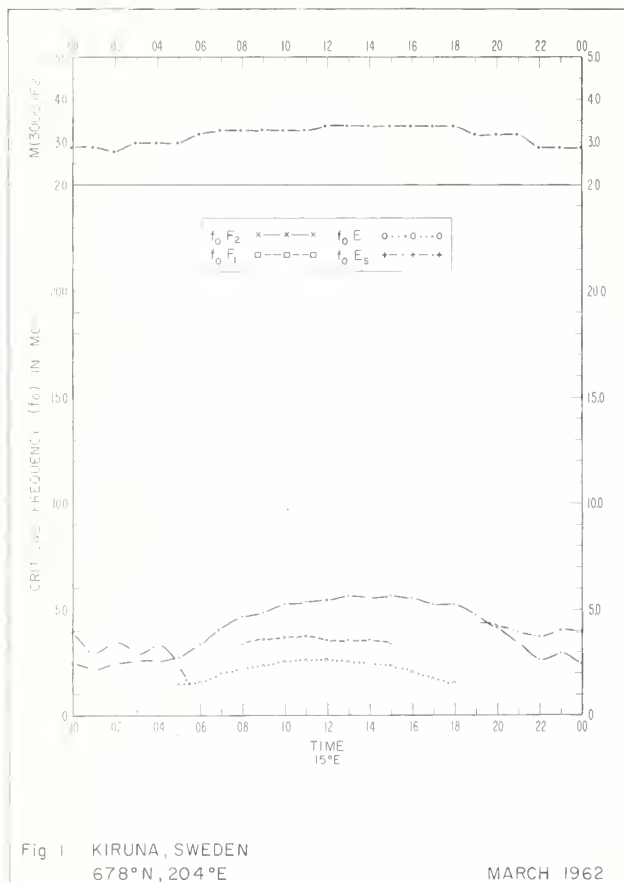
[illegible]

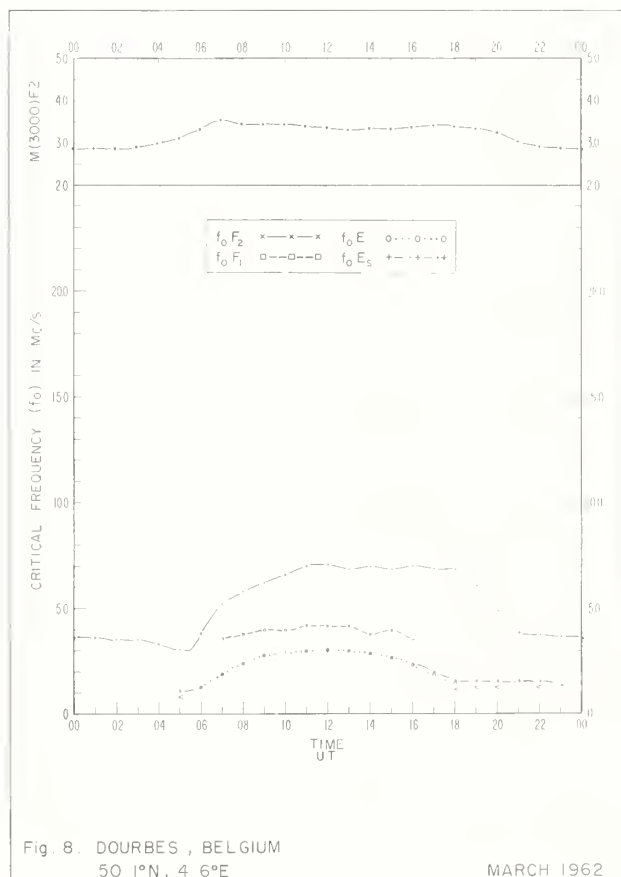
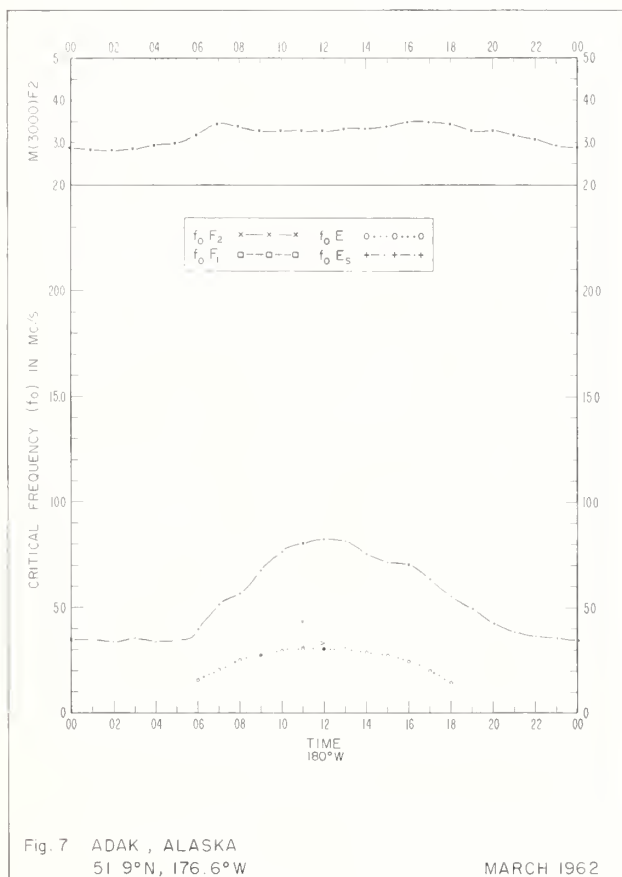
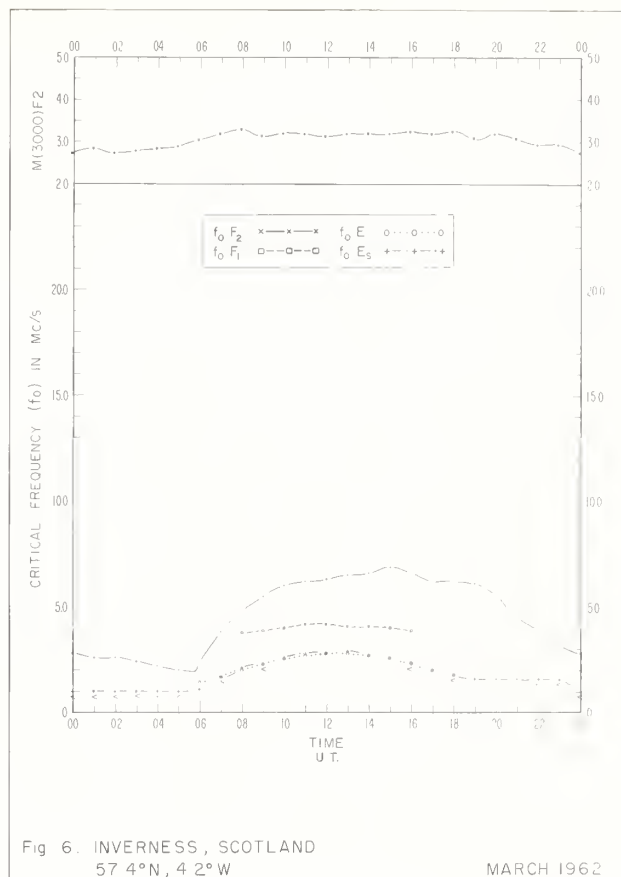
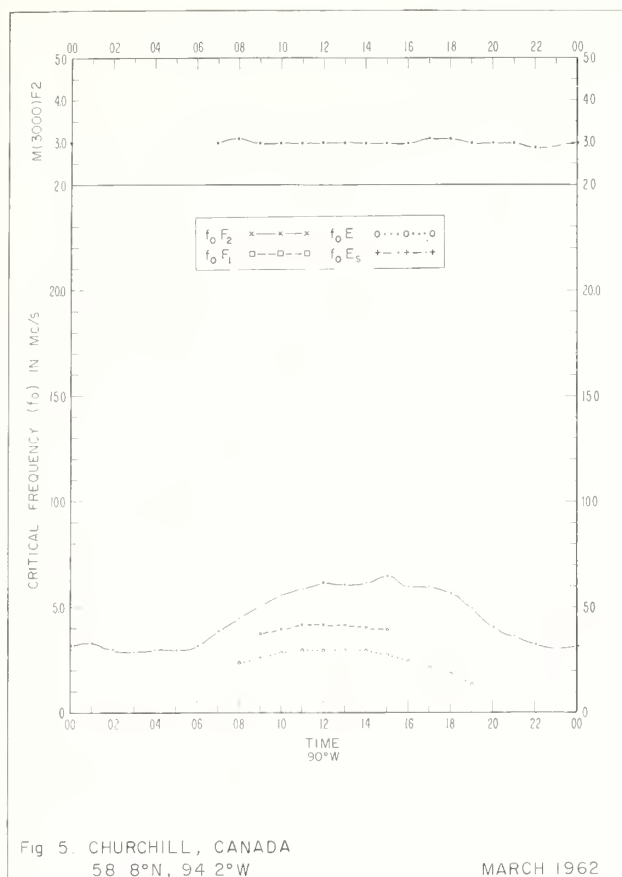
SWEEP 1.0 MC TO 16.0 MC IN 4 MINUTES.

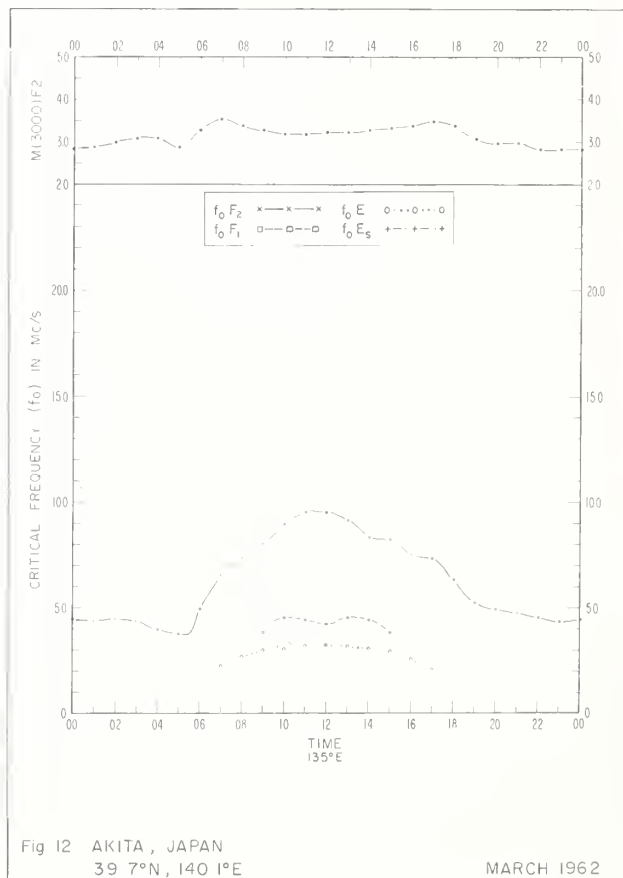
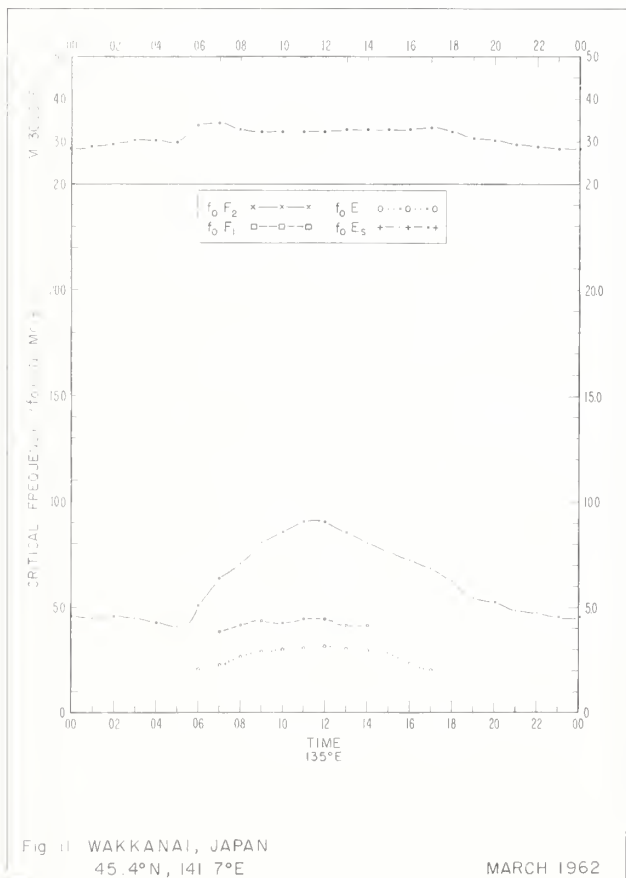
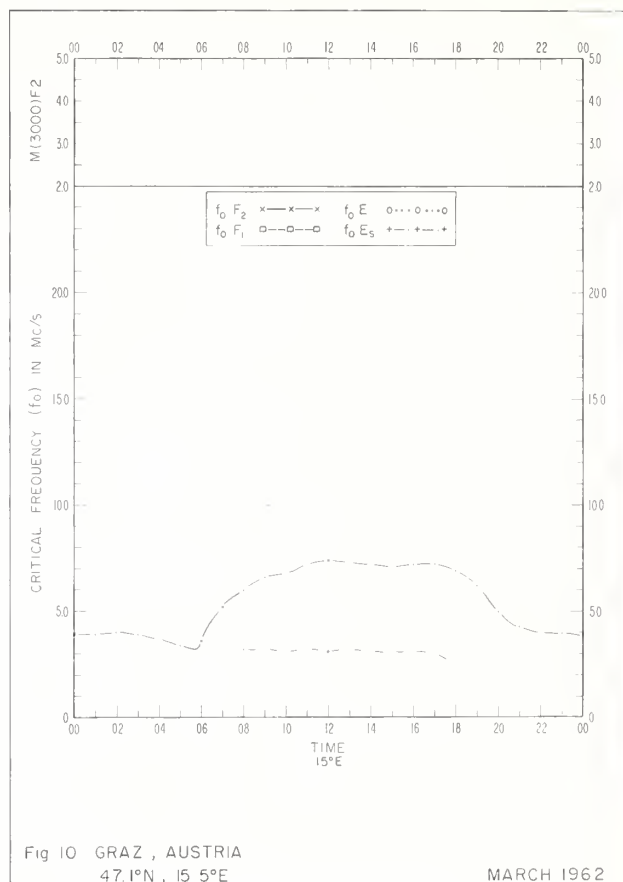
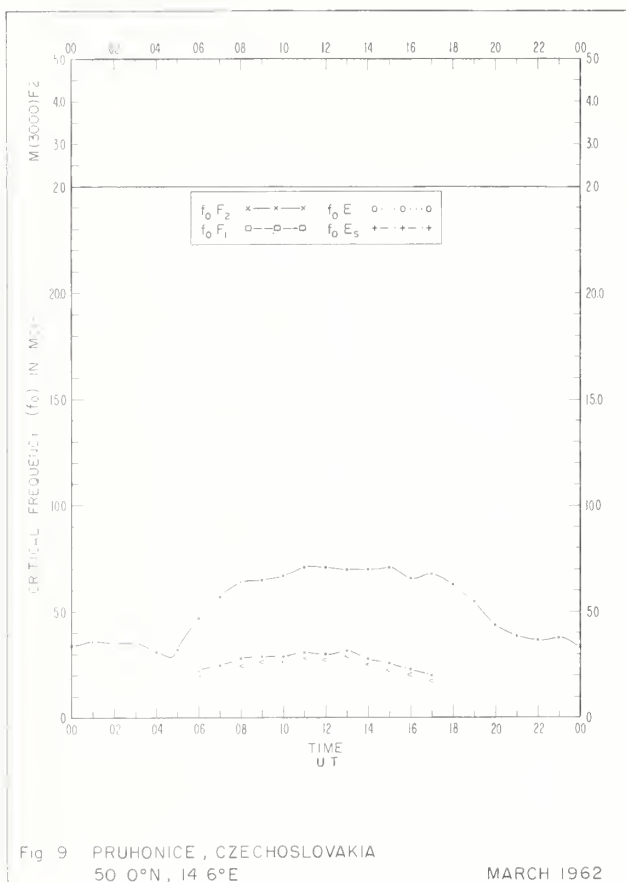
AUGUST • 1957

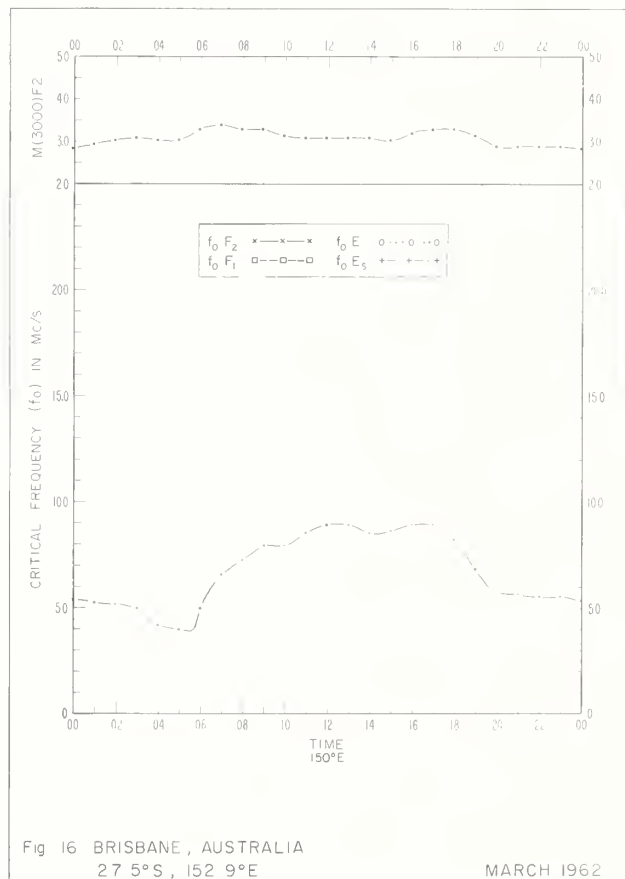
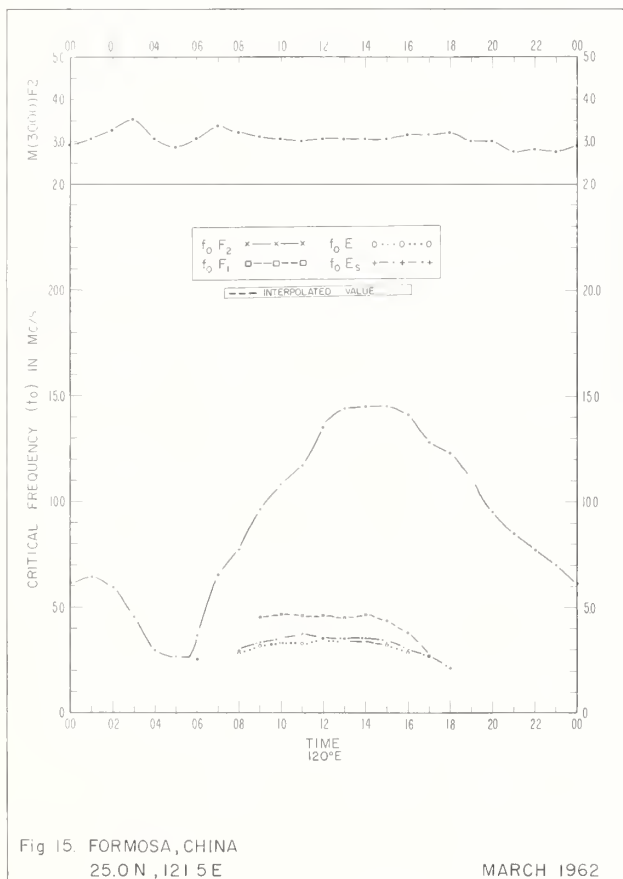
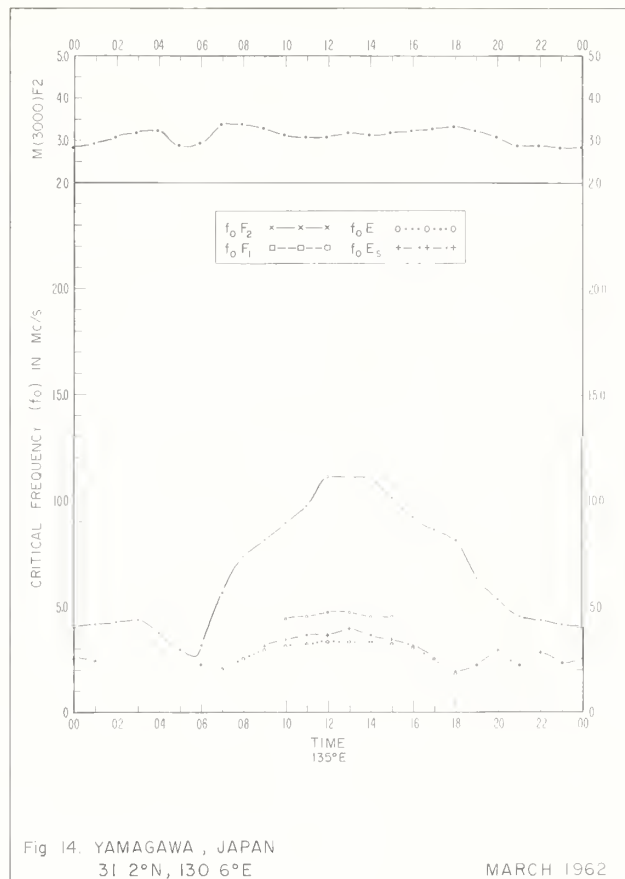
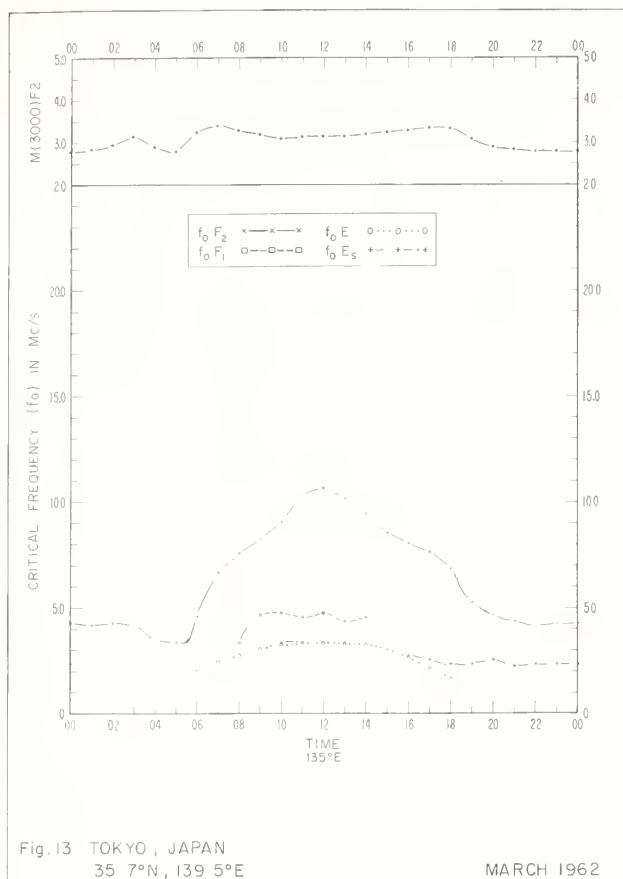
TABLE 44
LUMIJÄRVI, FINLAND
160.5N • 24.6E

[illegible]









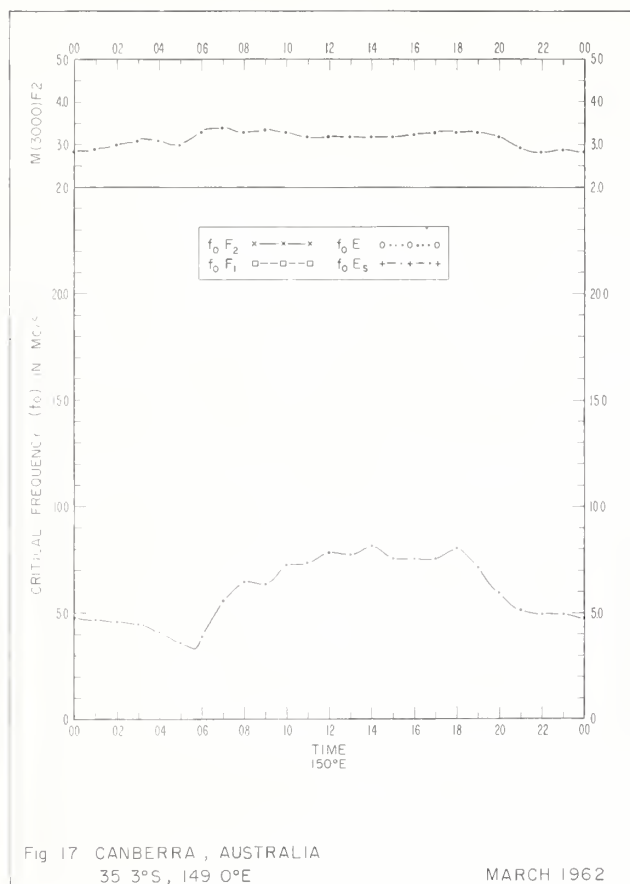


Fig 17 CANBERRA, AUSTRALIA
35 3°S, 149 0°E

MARCH 1962

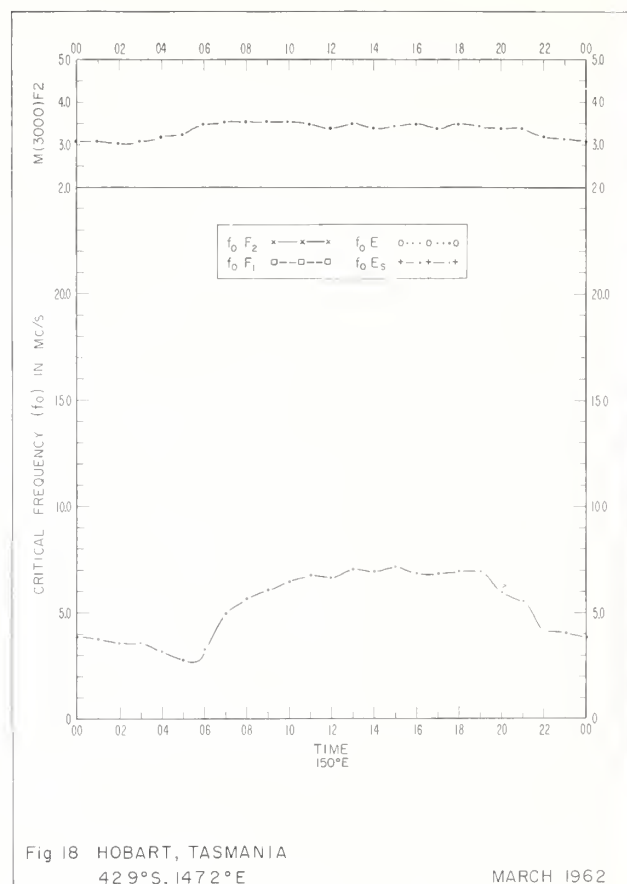


Fig 18 HOBART, TASMANIA
42 9°S, 147 2°E

MARCH 1962

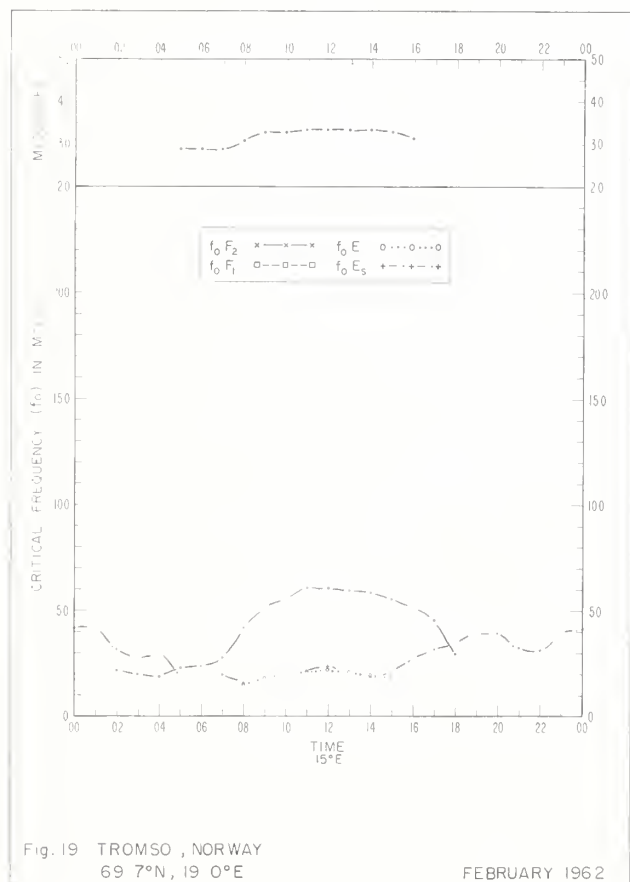


Fig 19 TROMSØ, NORWAY
69 7°N, 19 0°E

FEBRUARY 1962

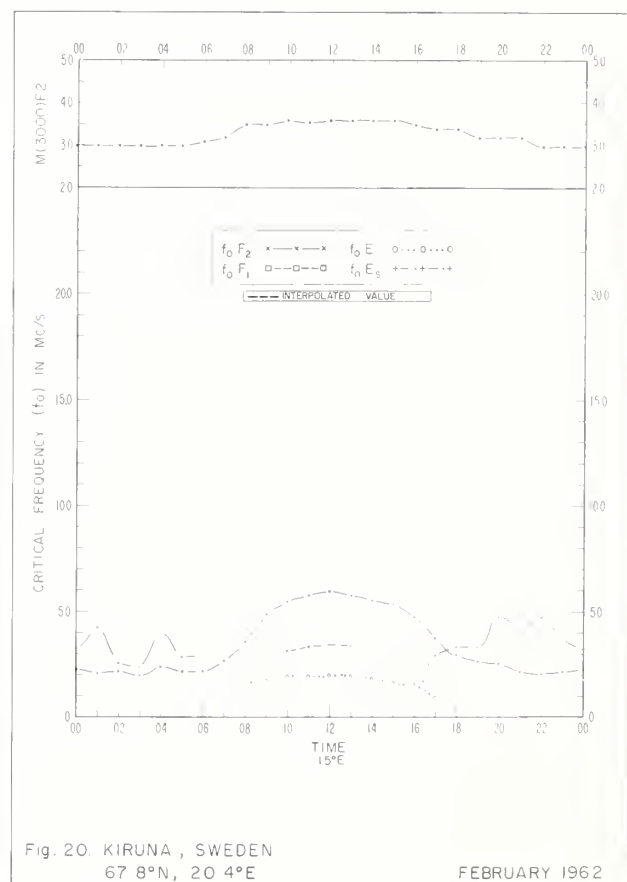


Fig 20 KIRUNA, SWEDEN
67 8°N, 20 4°E

FEBRUARY 1962

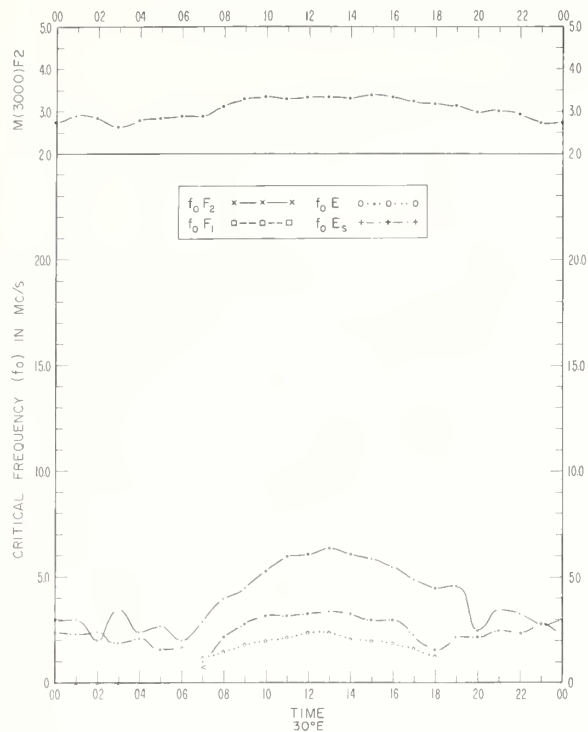


Fig. 21. SODANKYLÄ, FINLAND
67°4'N, 26°6'E

FEBRUARY 1962

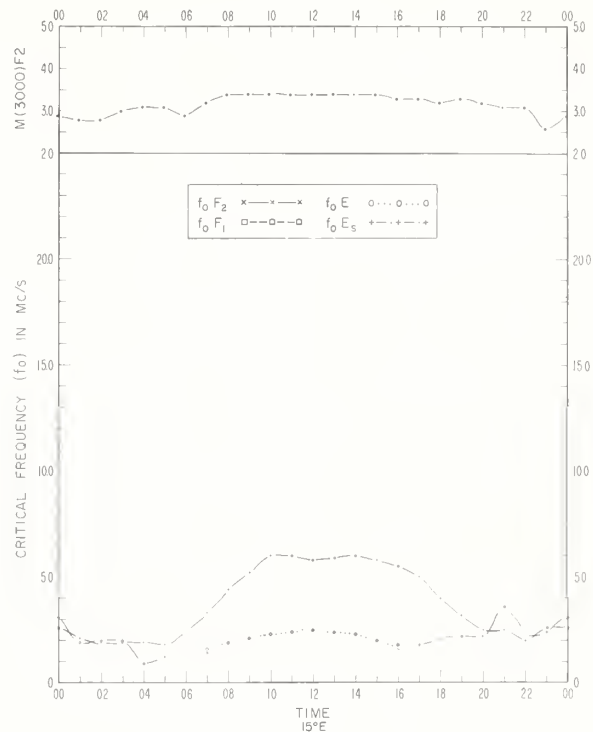


Fig. 22. LULEÅ, SWEDEN
65°6'N, 22°1'E

FEBRUARY 1962

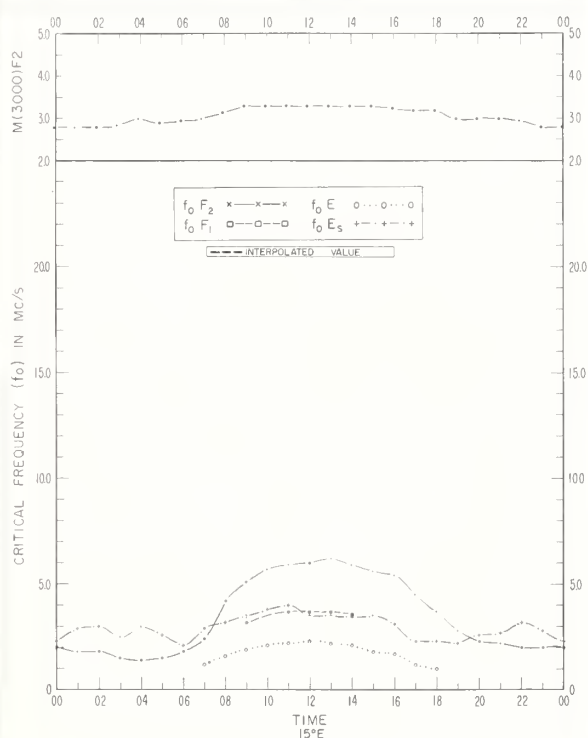


Fig. 23. LYCKSELE, SWEDEN
64°7'N, 18°8'E

FEBRUARY 1962

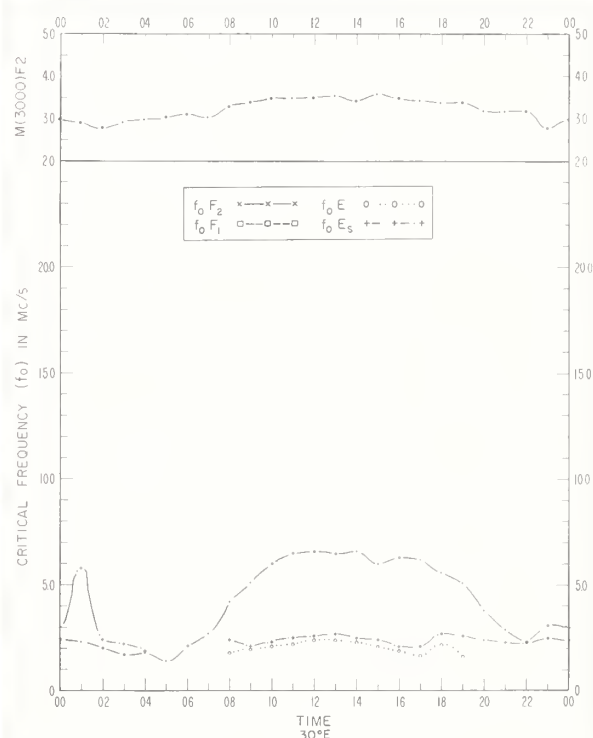
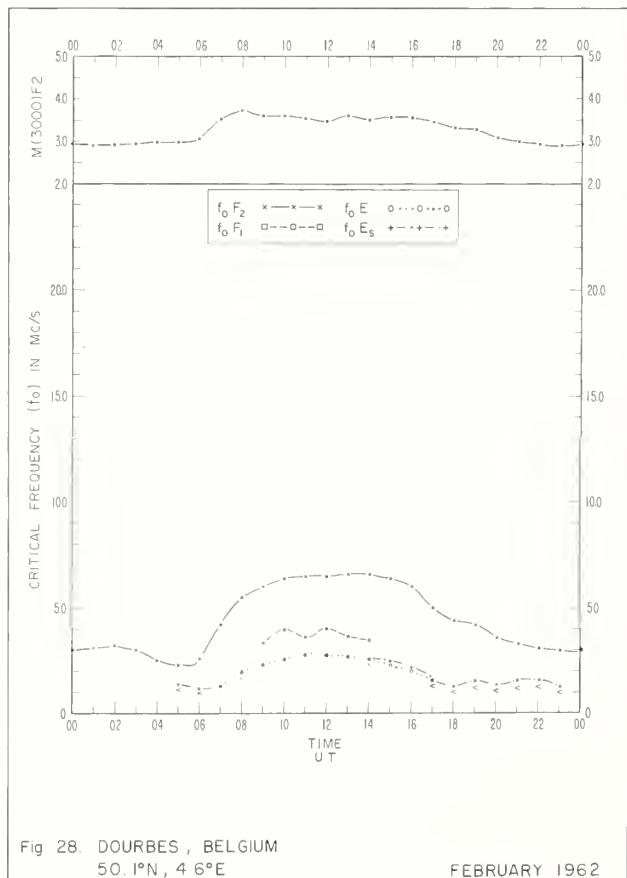
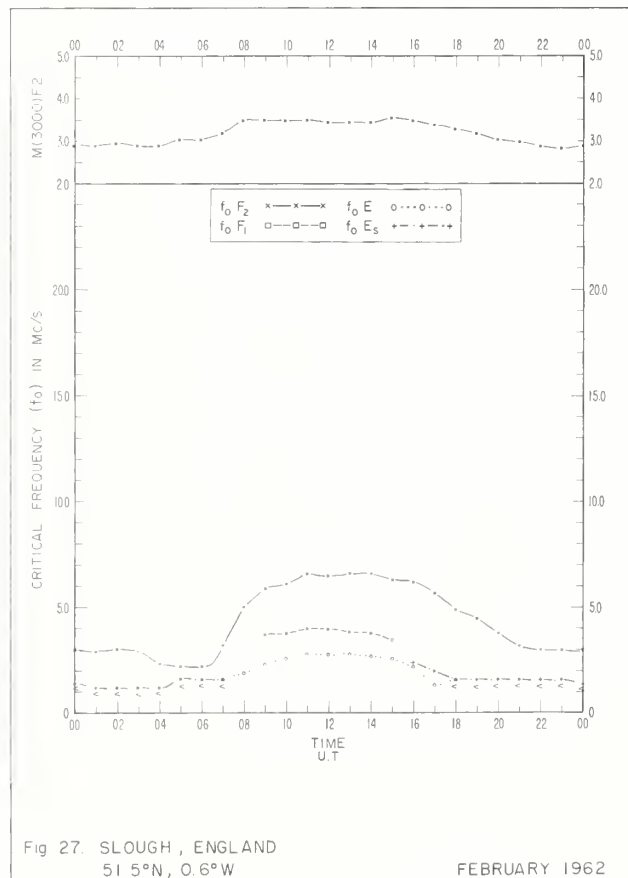
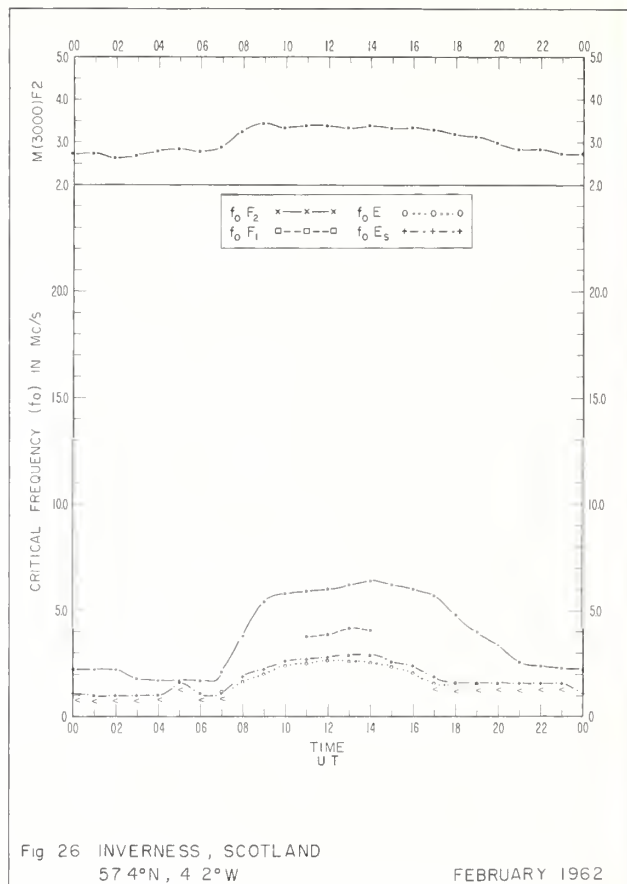
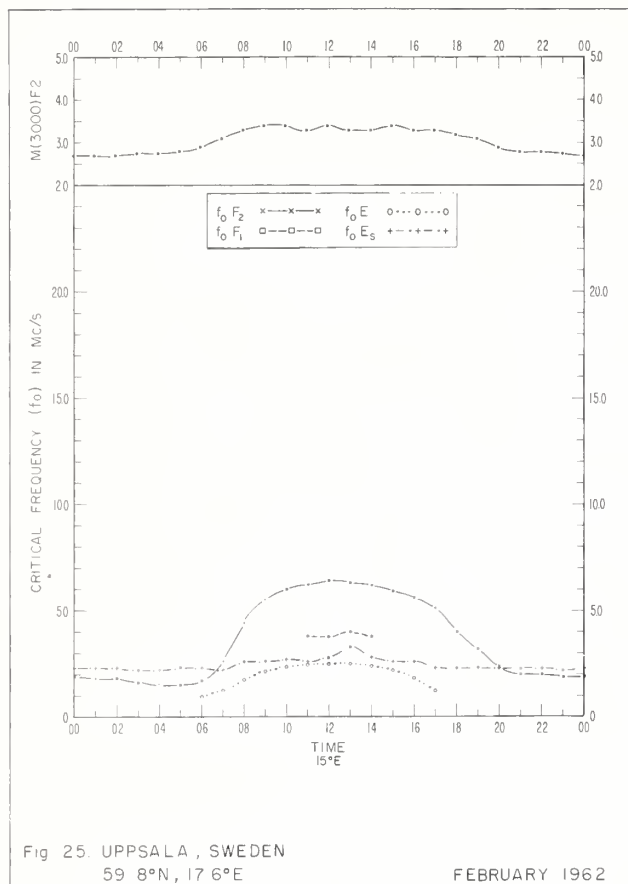
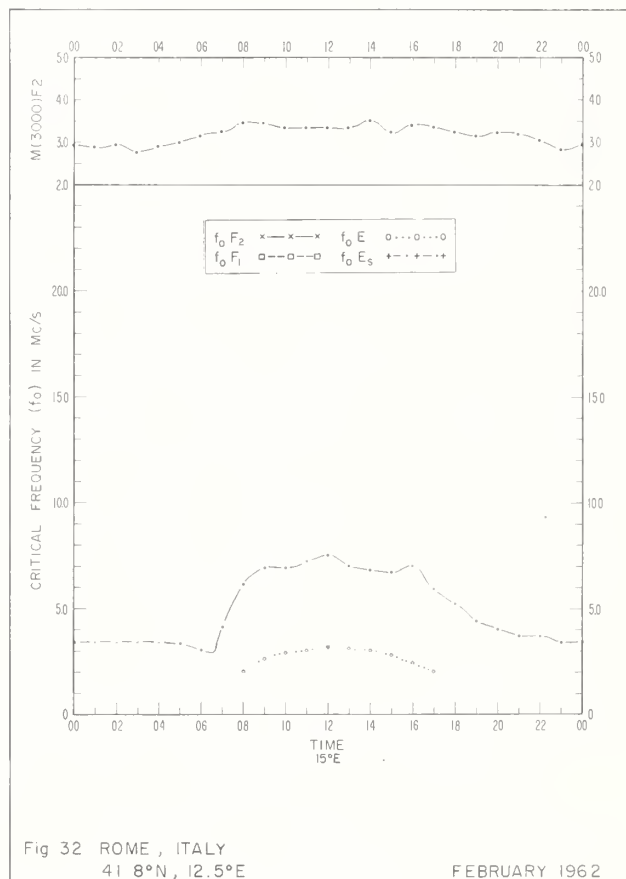
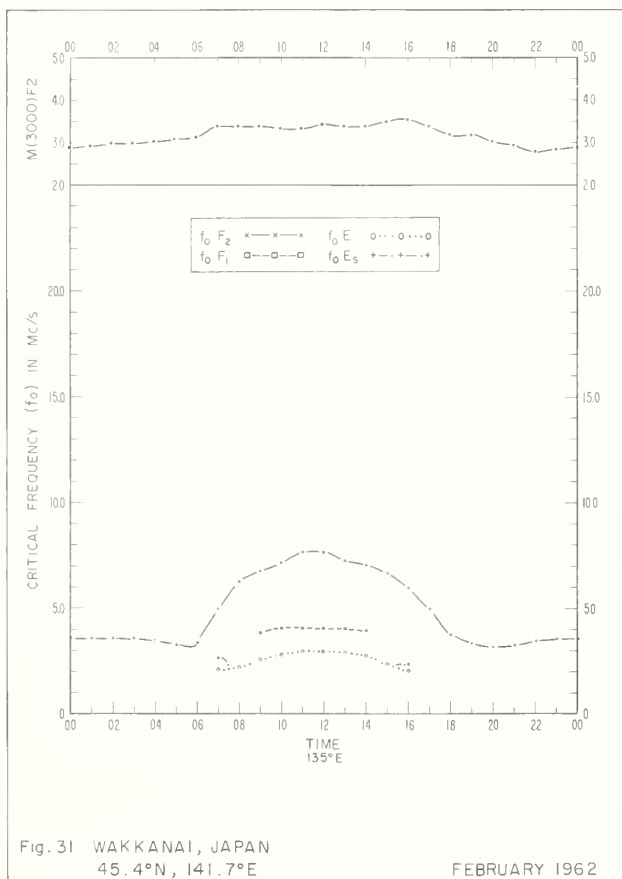
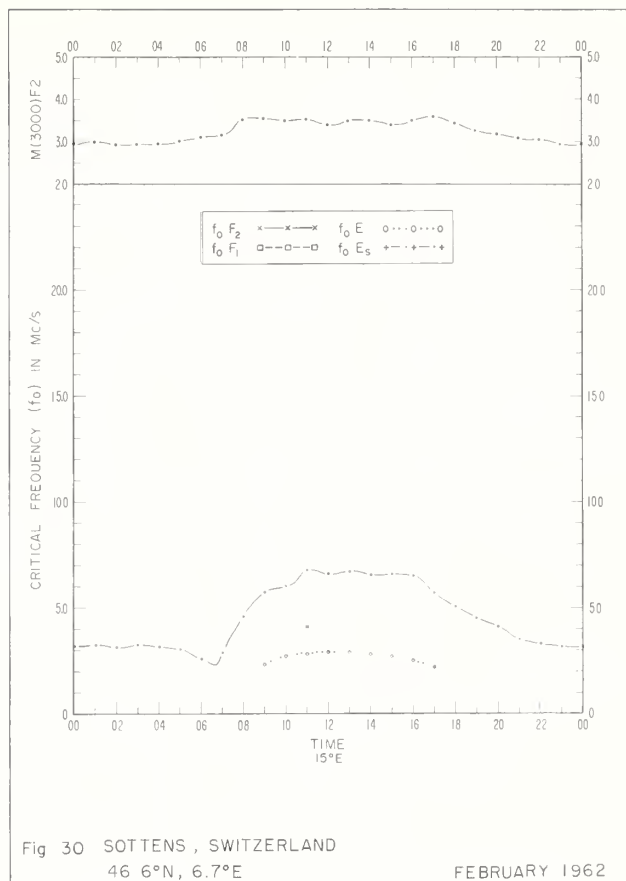
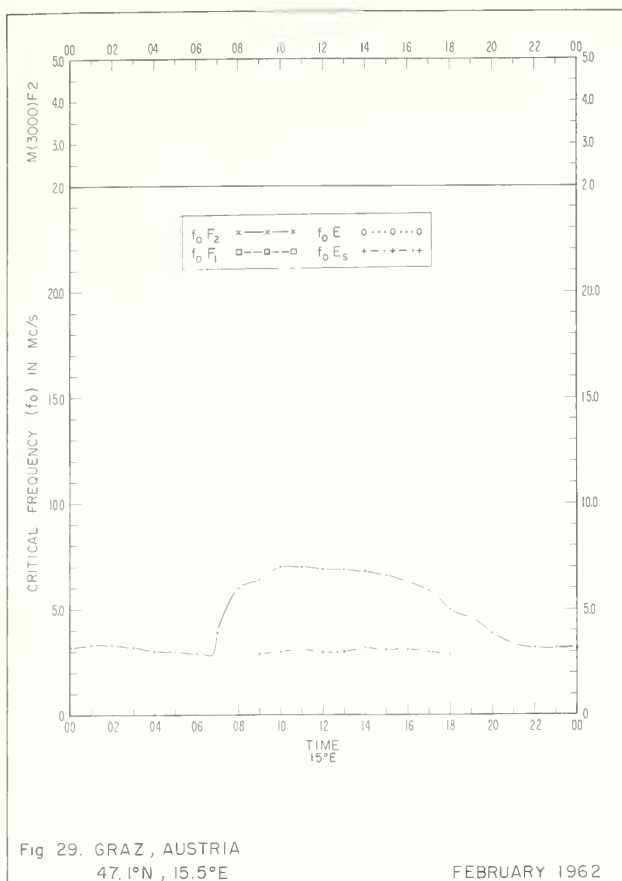
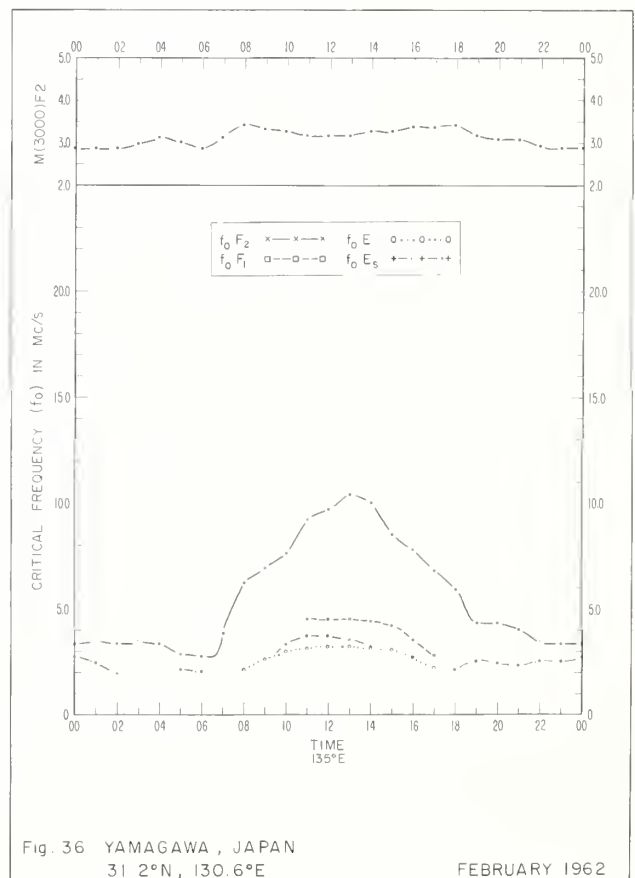
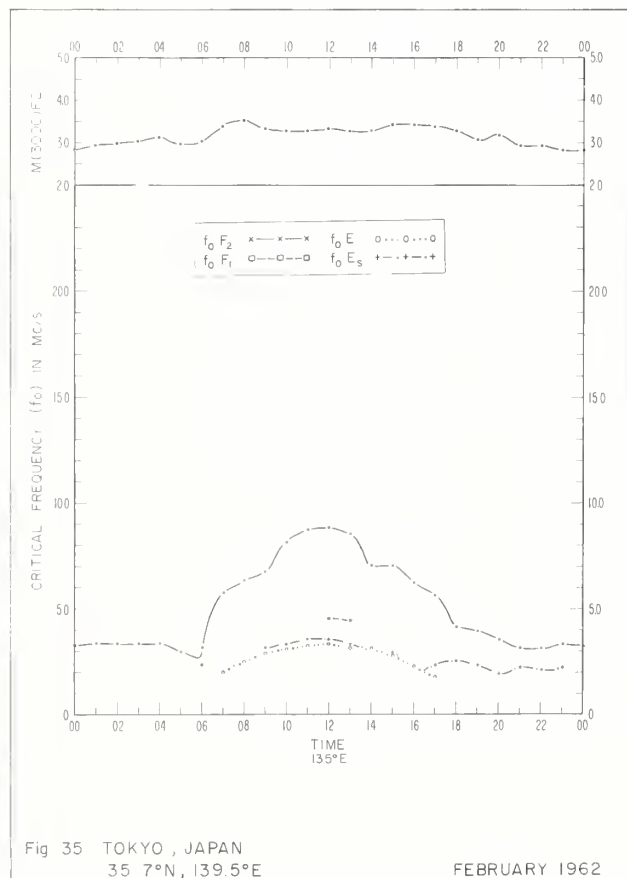
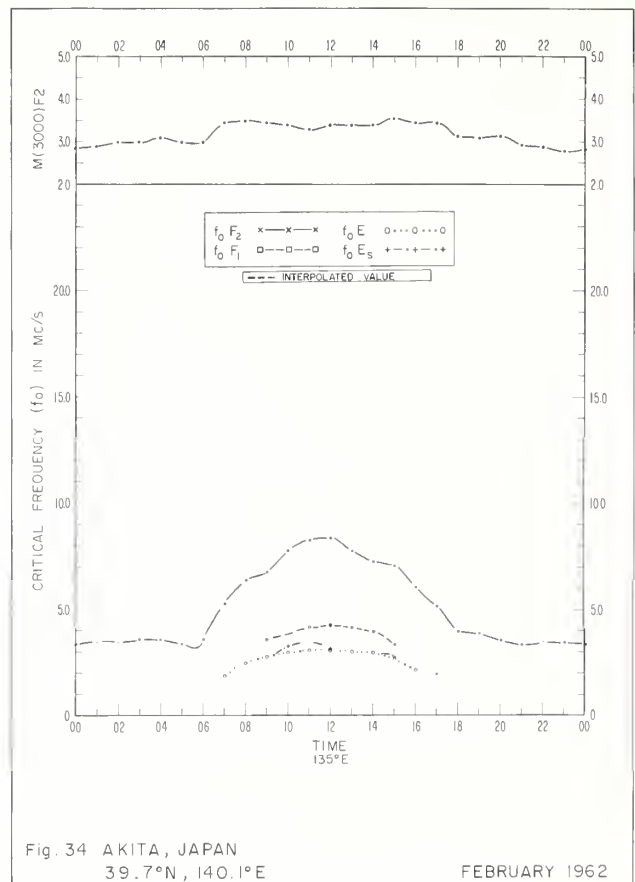
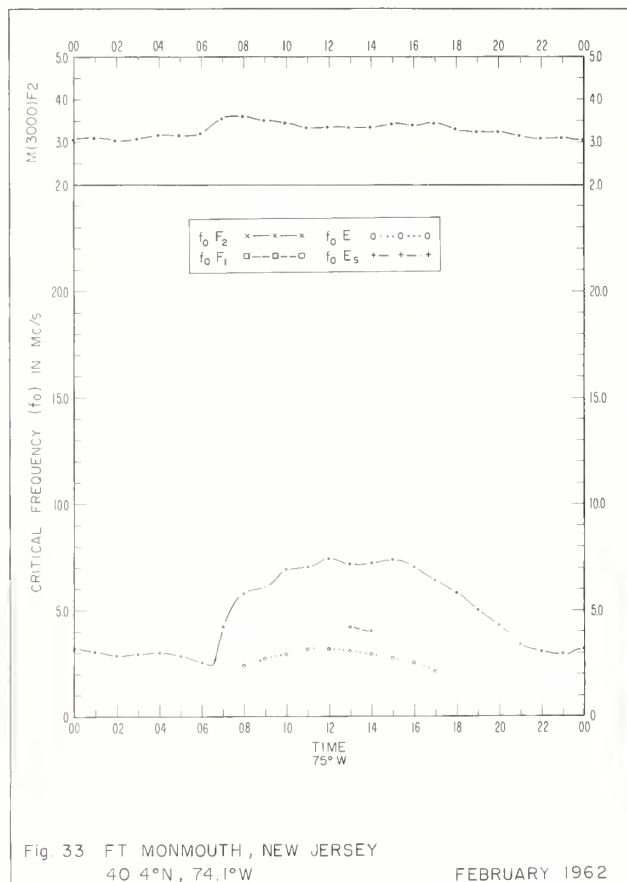


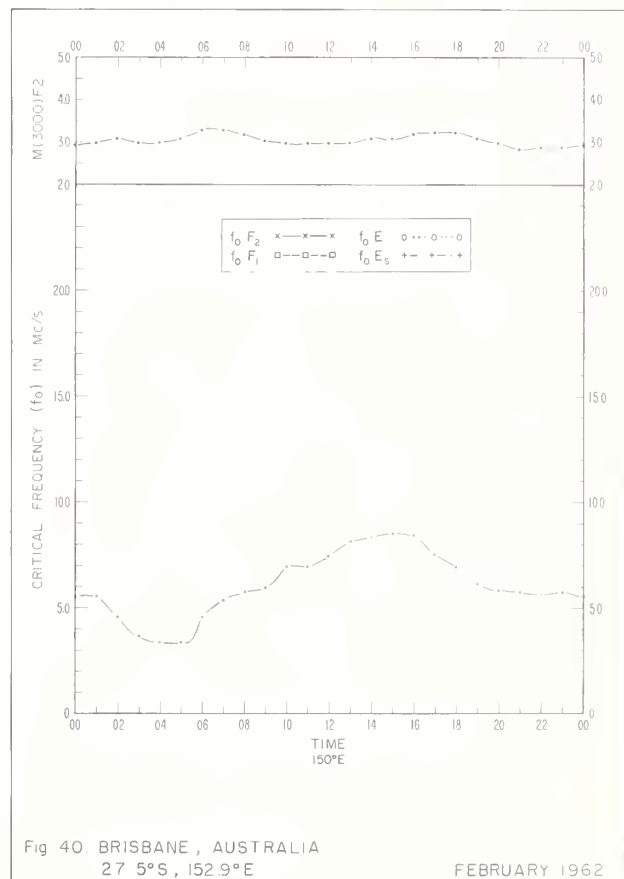
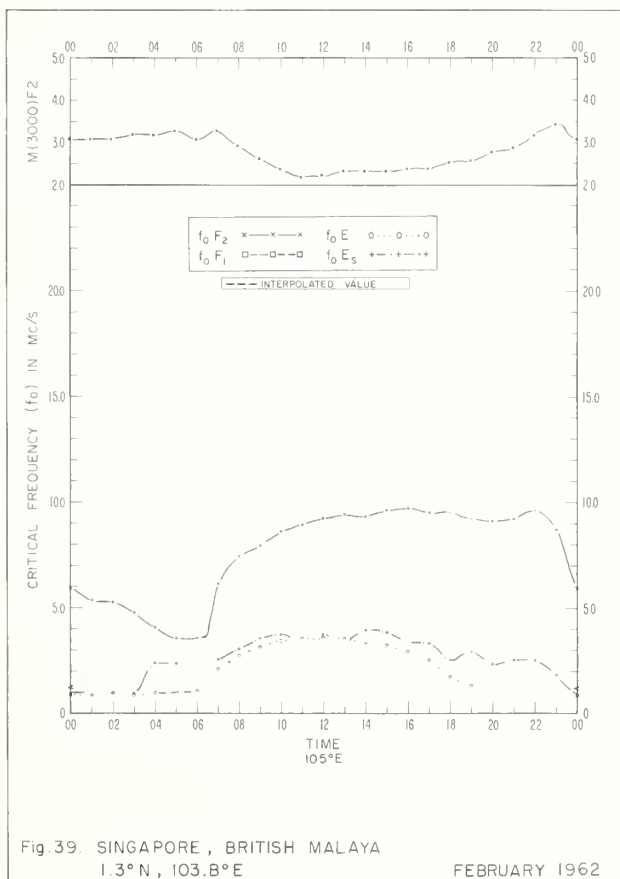
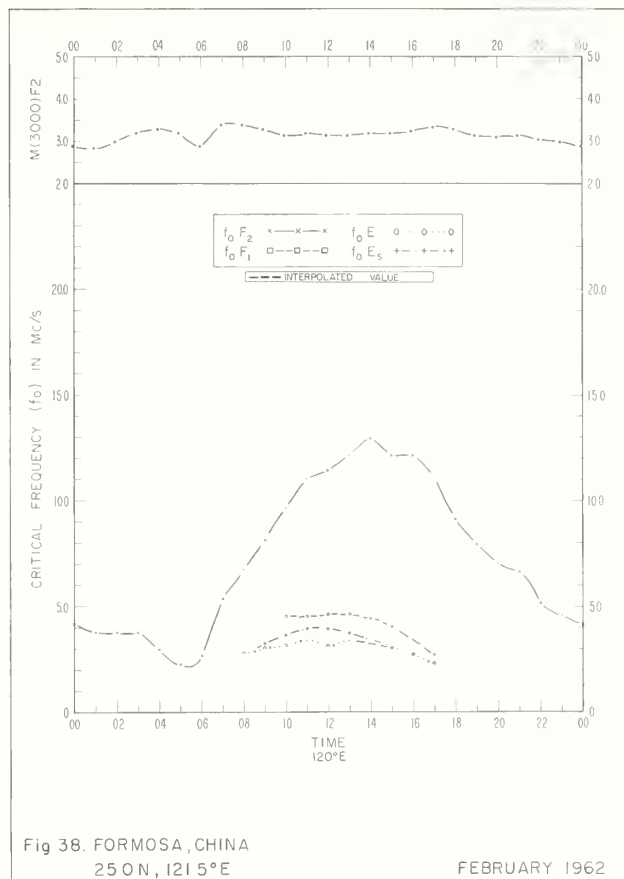
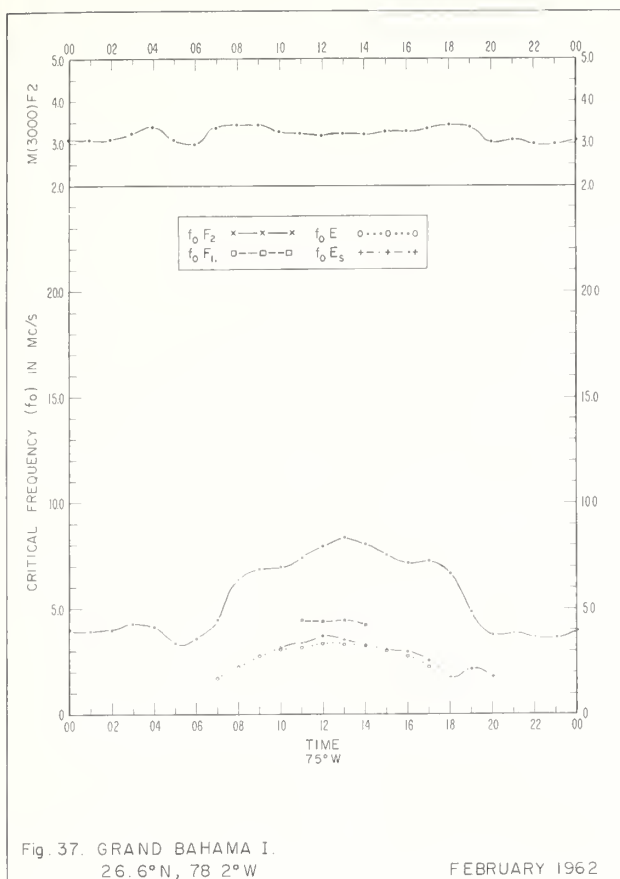
Fig. 24. NURMIJÄRVI, FINLAND
60°5'N, 24°6'E

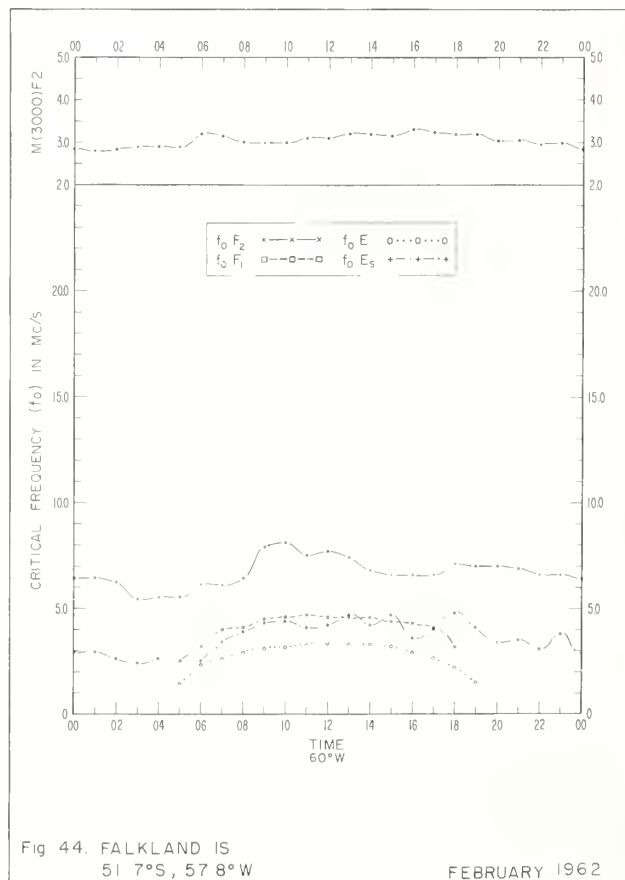
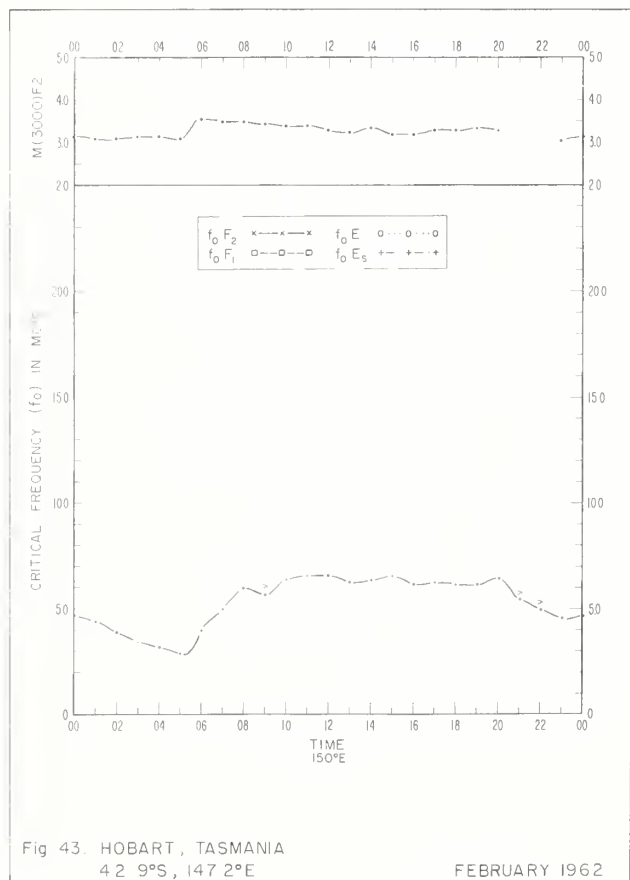
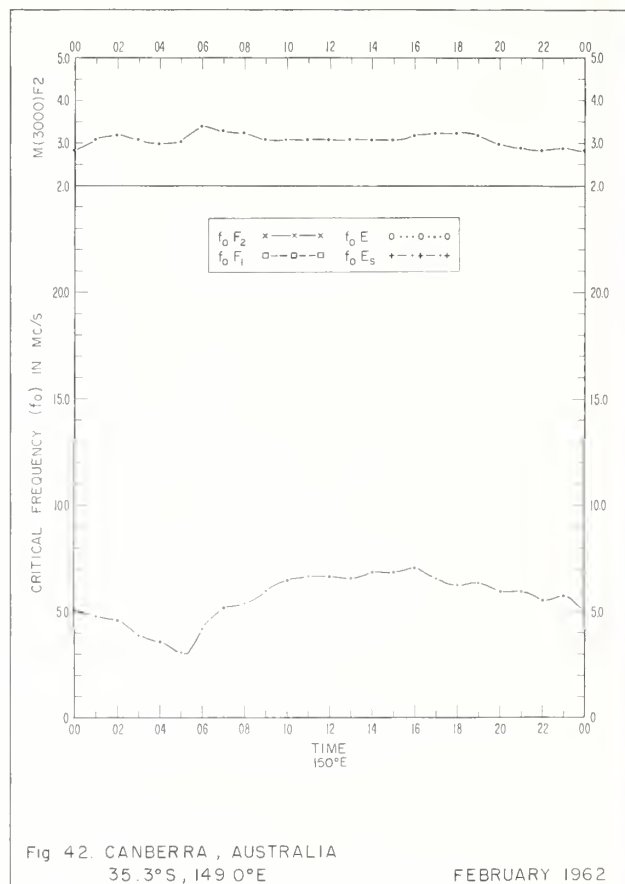
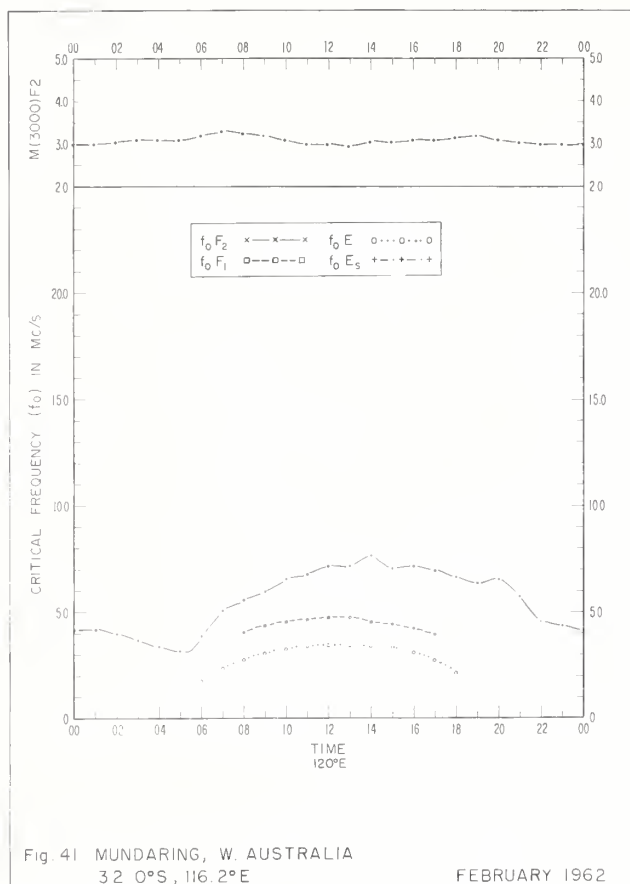
FEBRUARY 1962

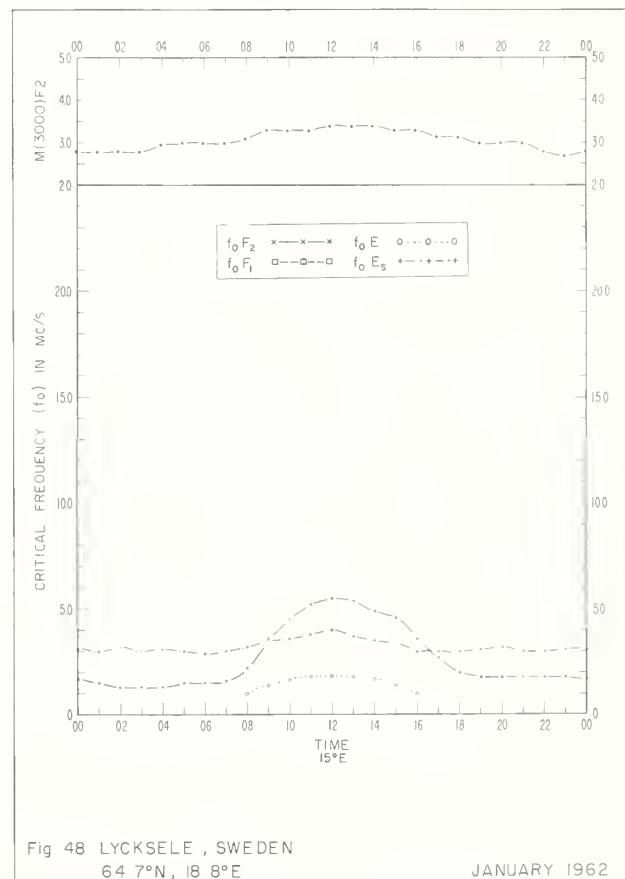
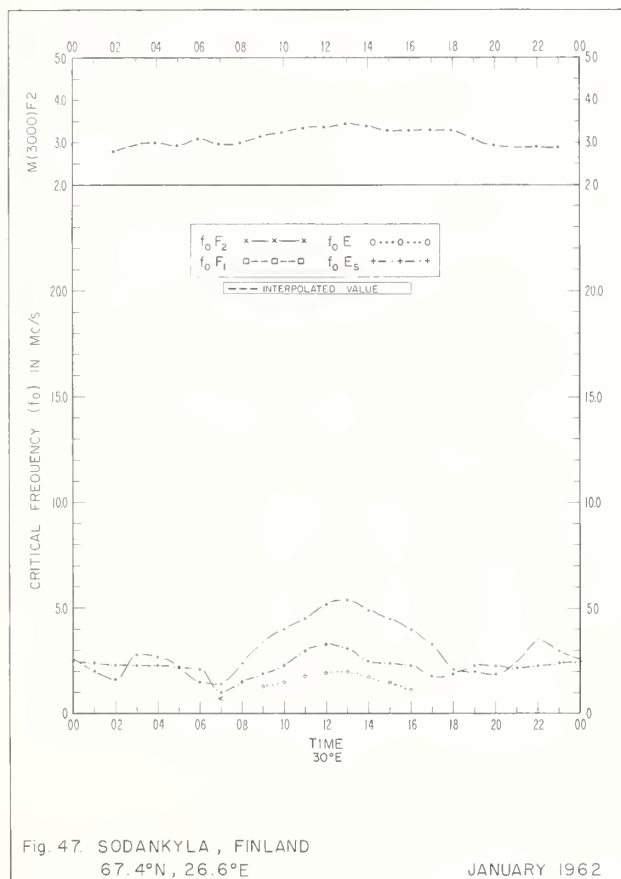
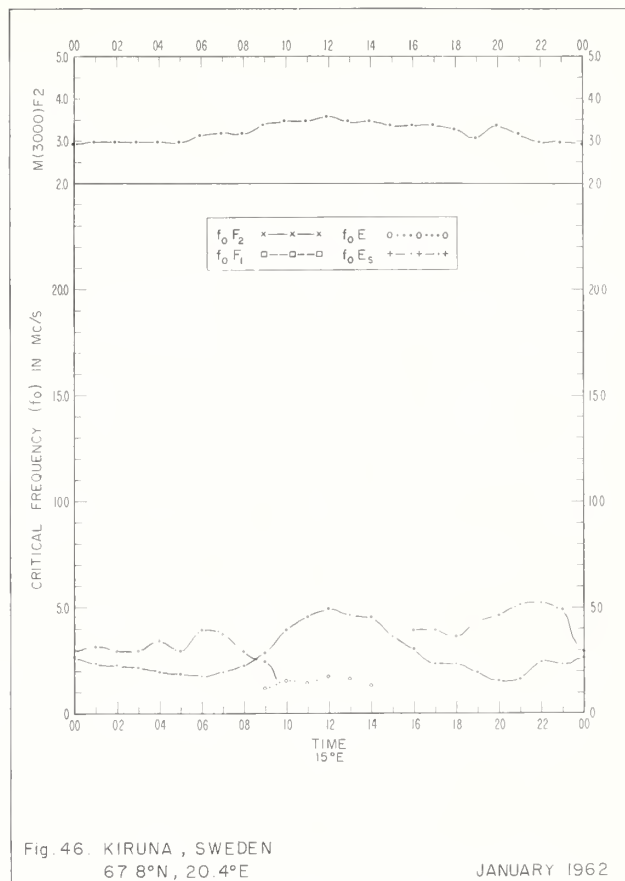
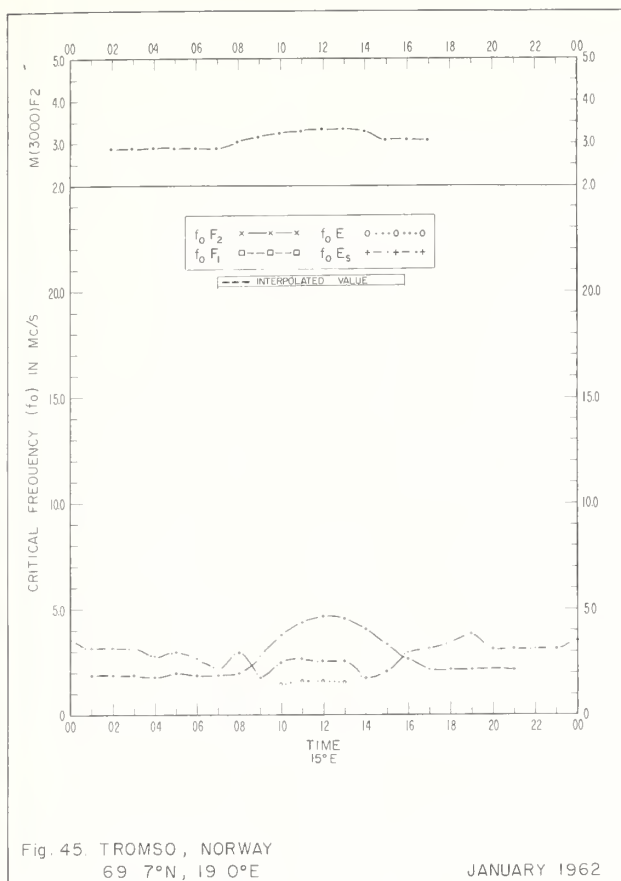


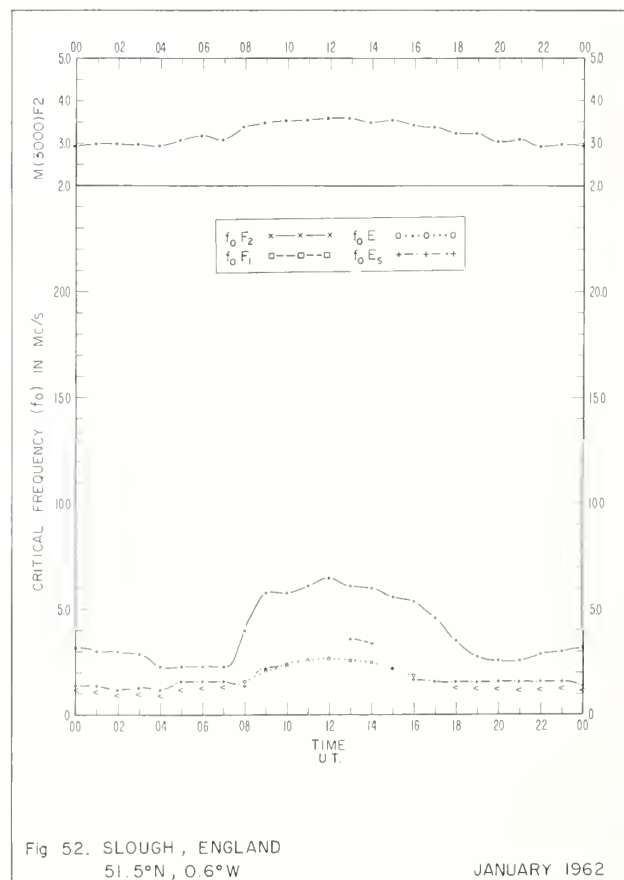
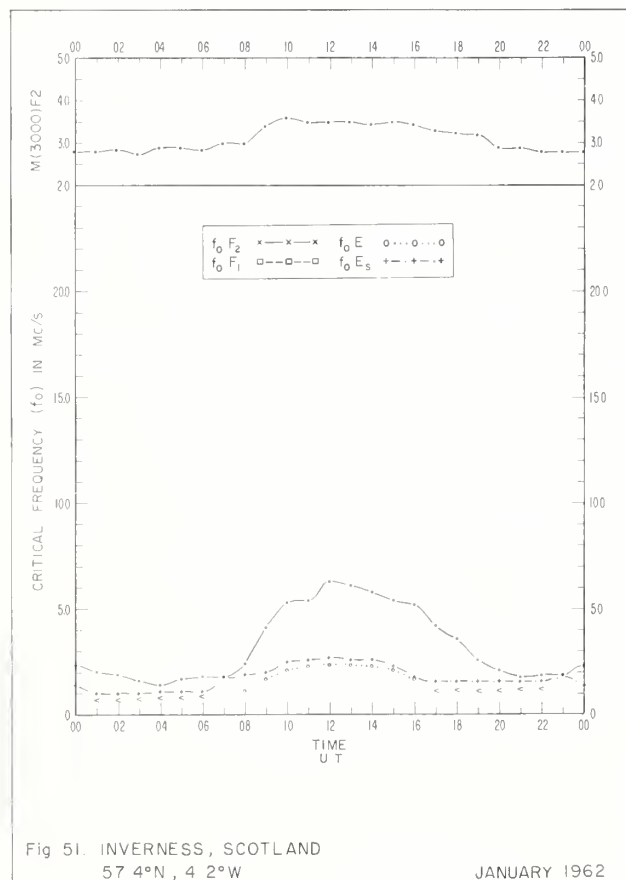
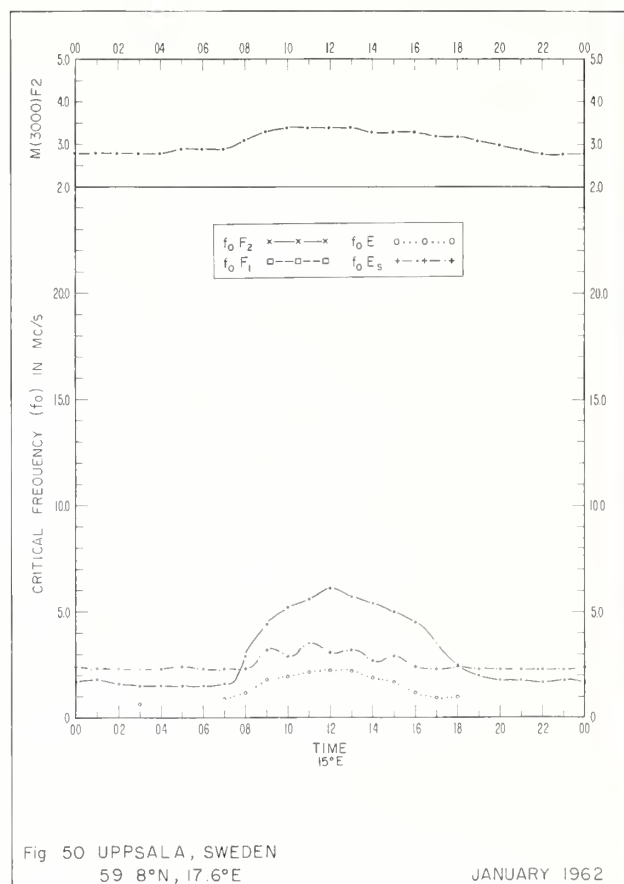
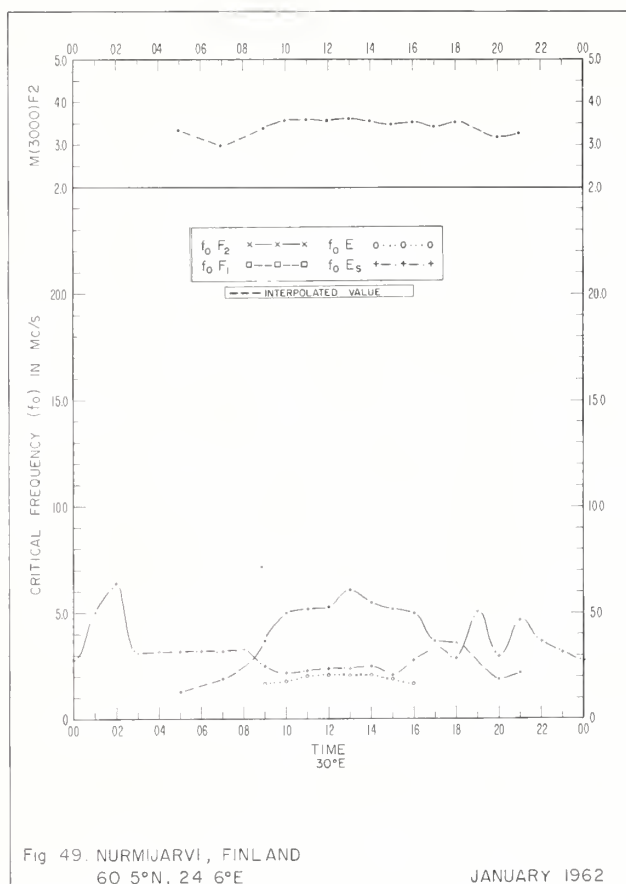












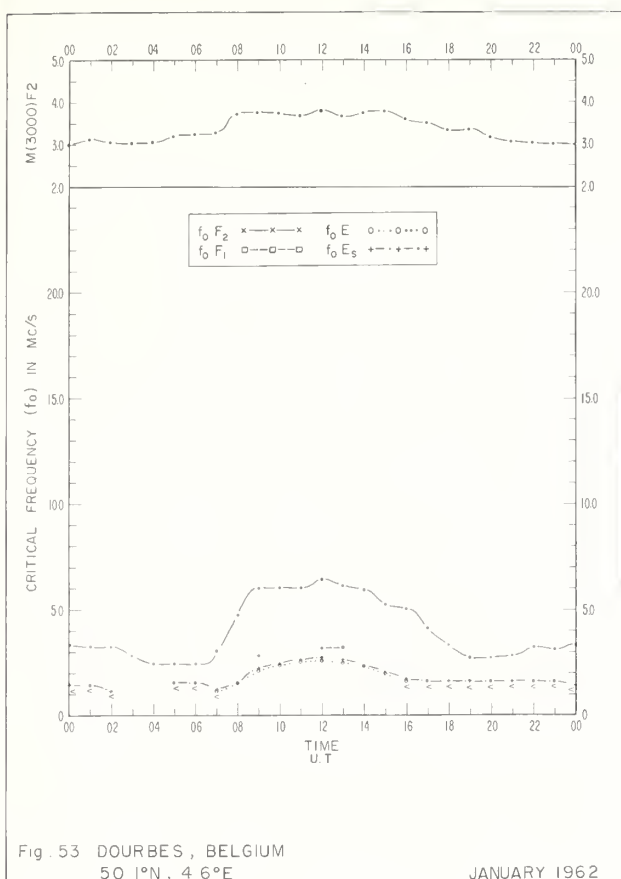


Fig. 53 DOURBES, BELGIUM
50 1°N, 4 6°E

JANUARY 1962

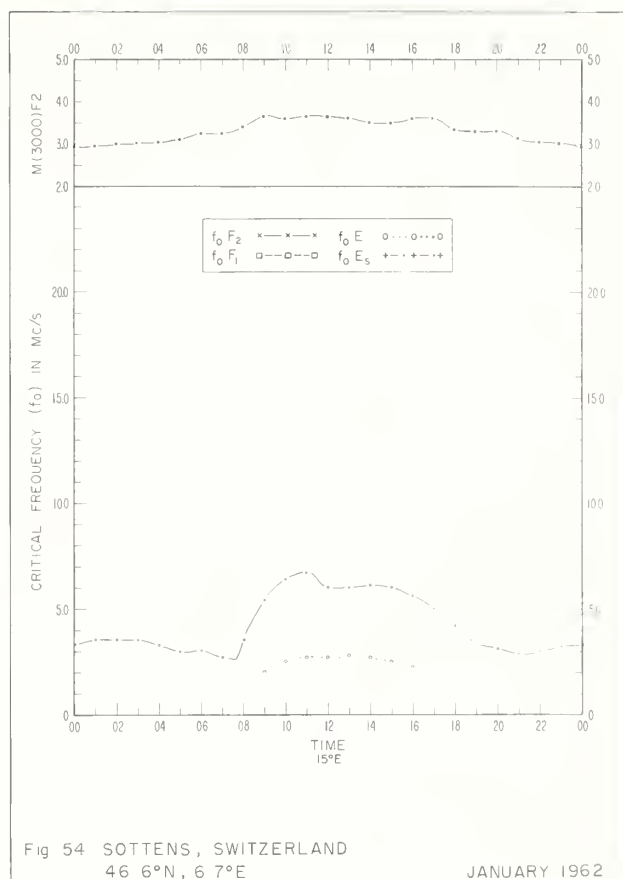


Fig. 54 SOTTENS, SWITZERLAND
46 6°N, 6 7°E

JANUARY 1962

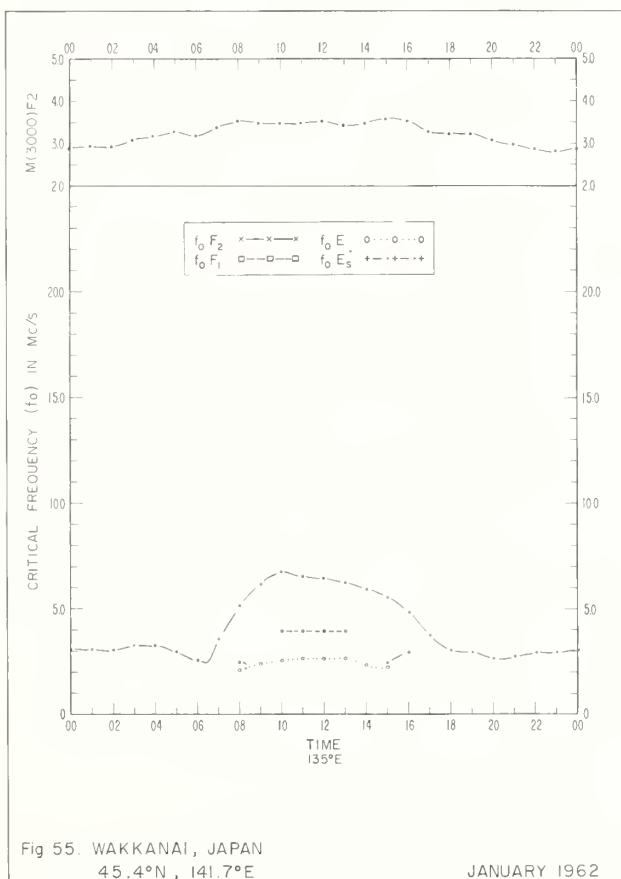


Fig. 55. WAKKANAI, JAPAN
45.4°N, 141.7°E

JANUARY 1962

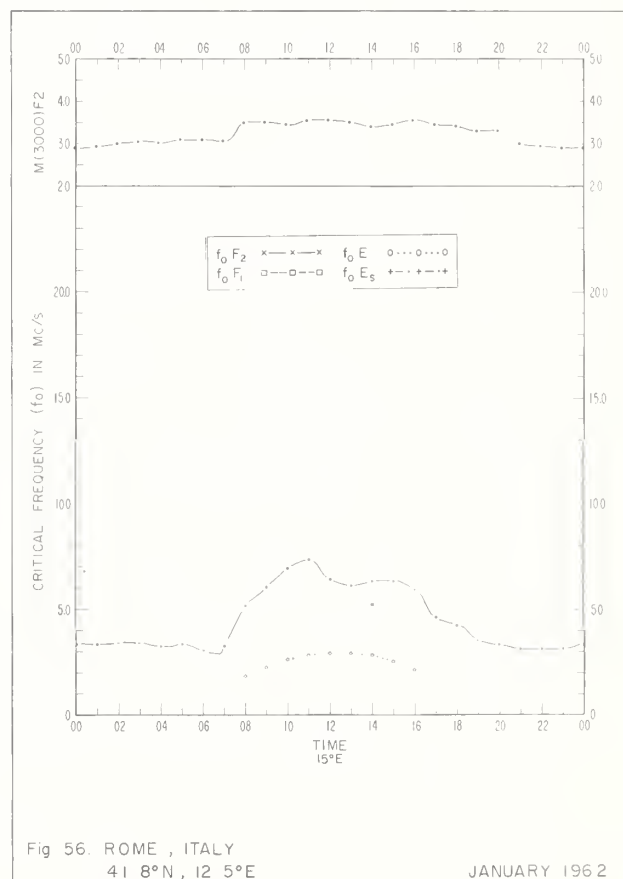
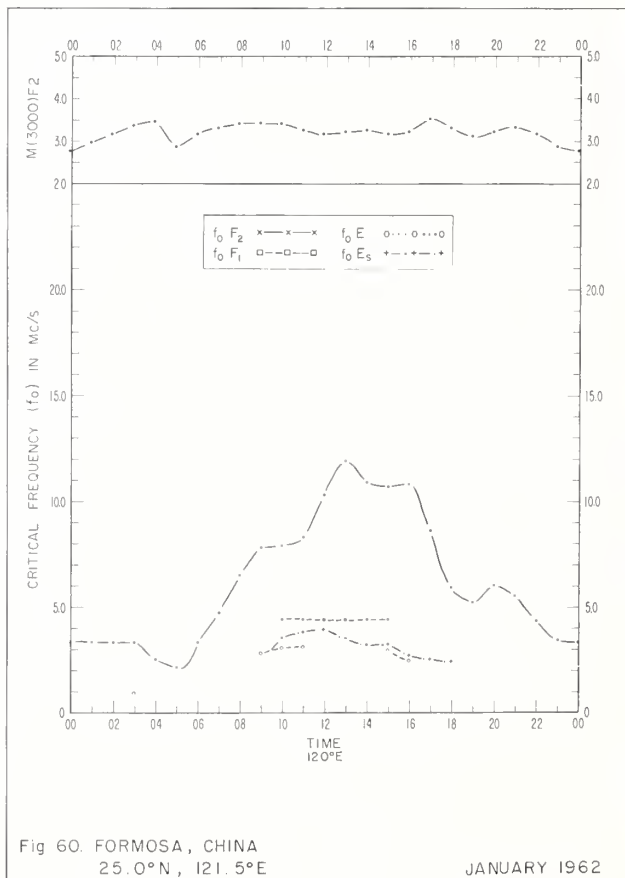
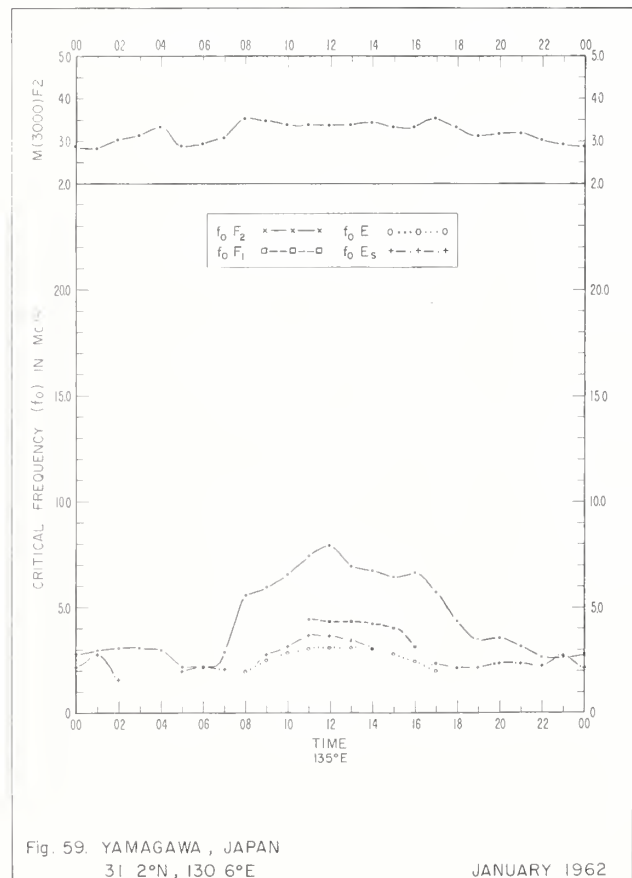
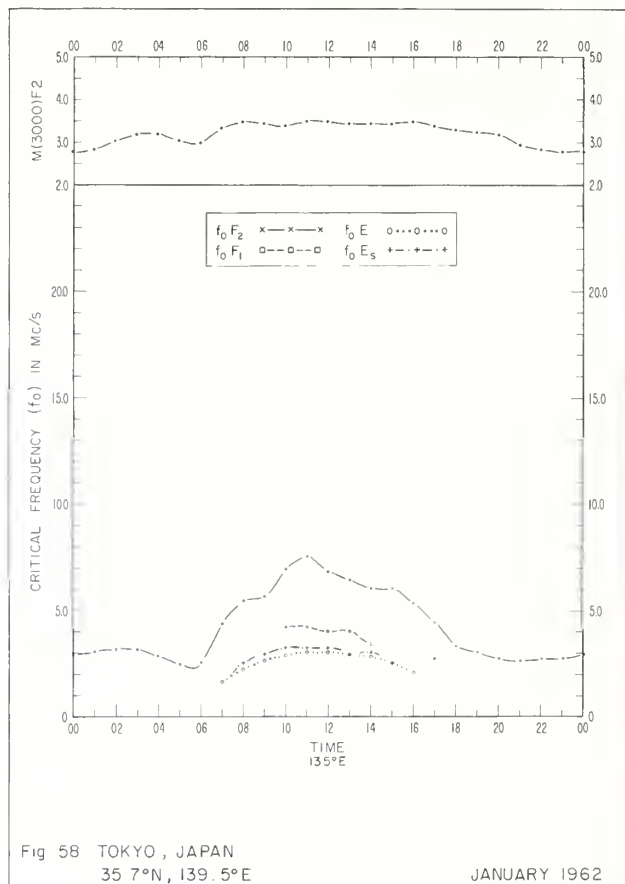
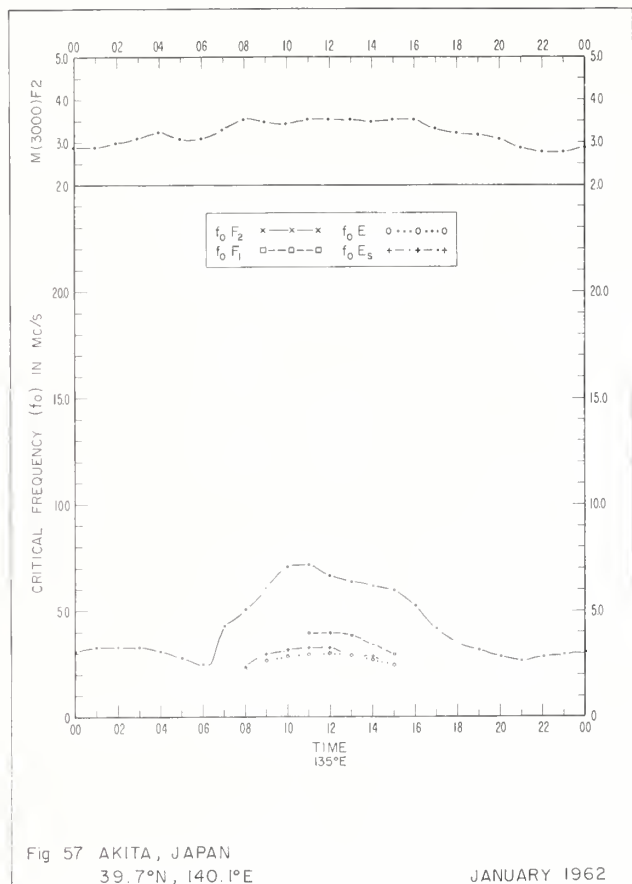
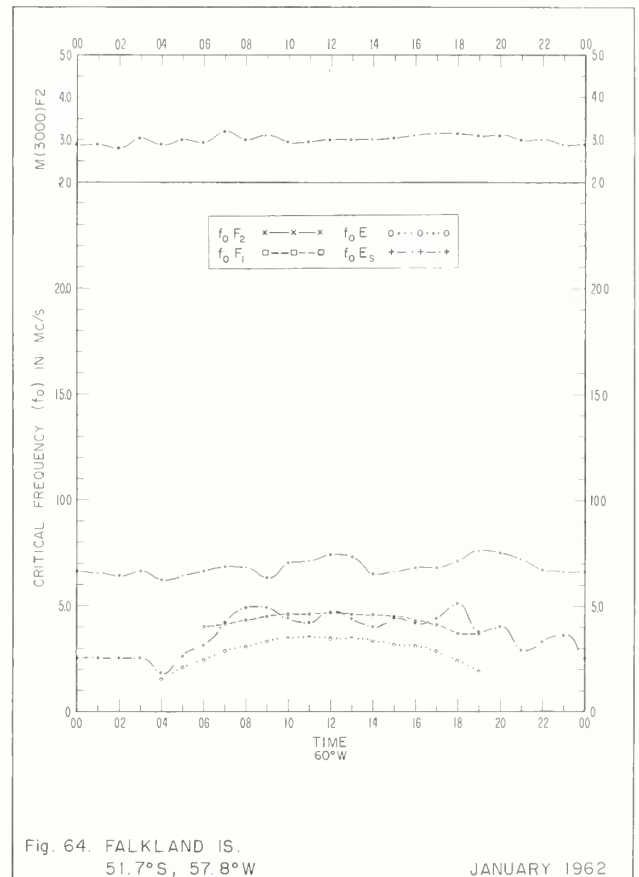
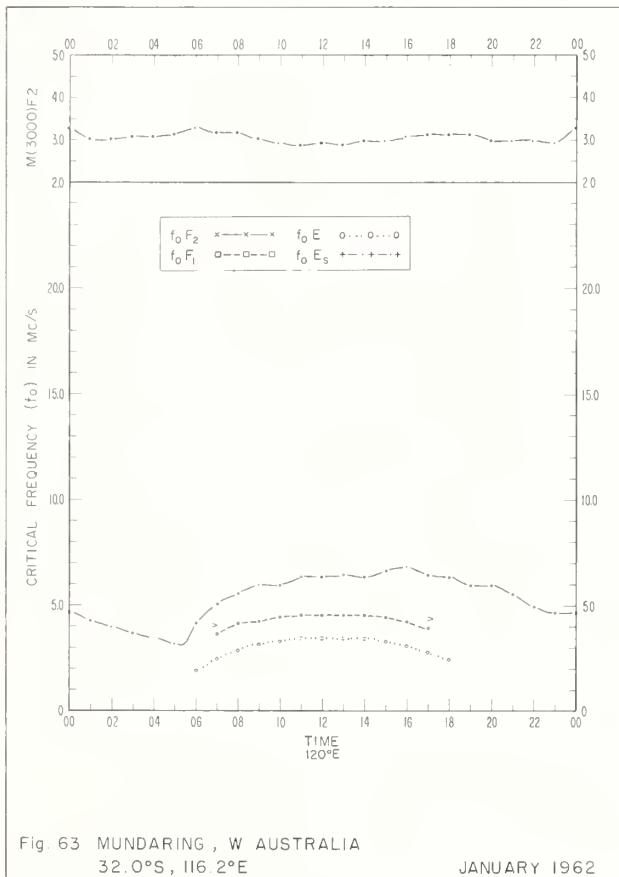
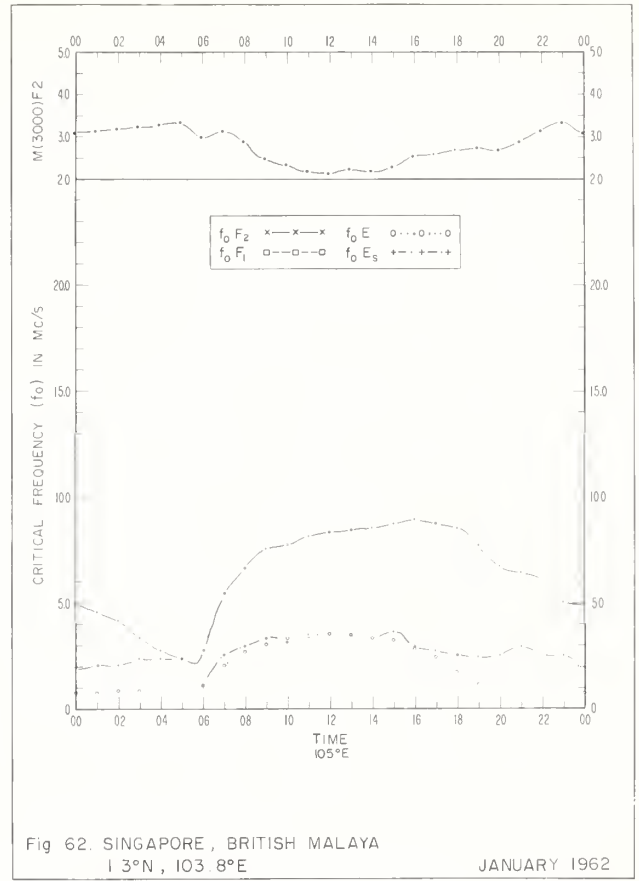
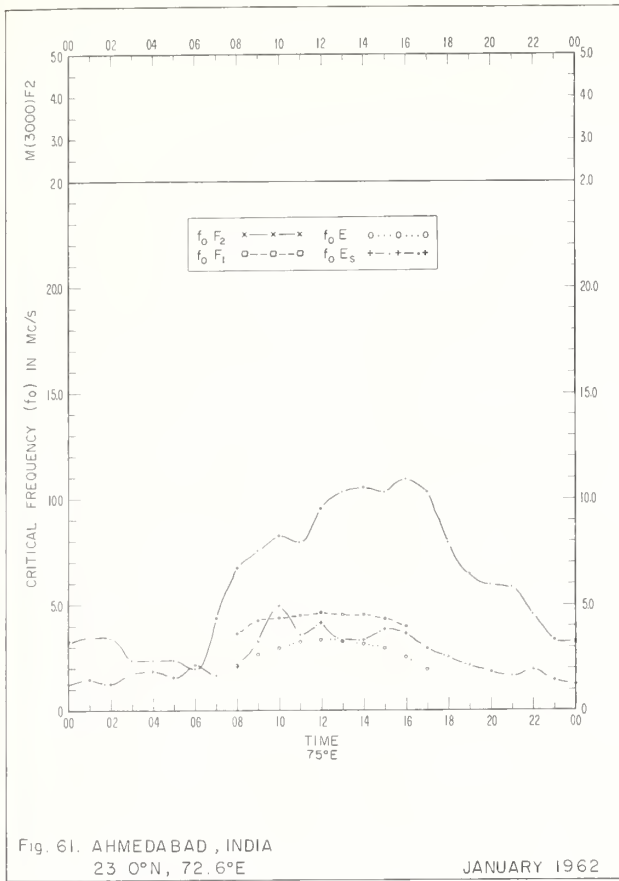


Fig. 56. ROME, ITALY
41 8°N, 12 5°E

JANUARY 1962





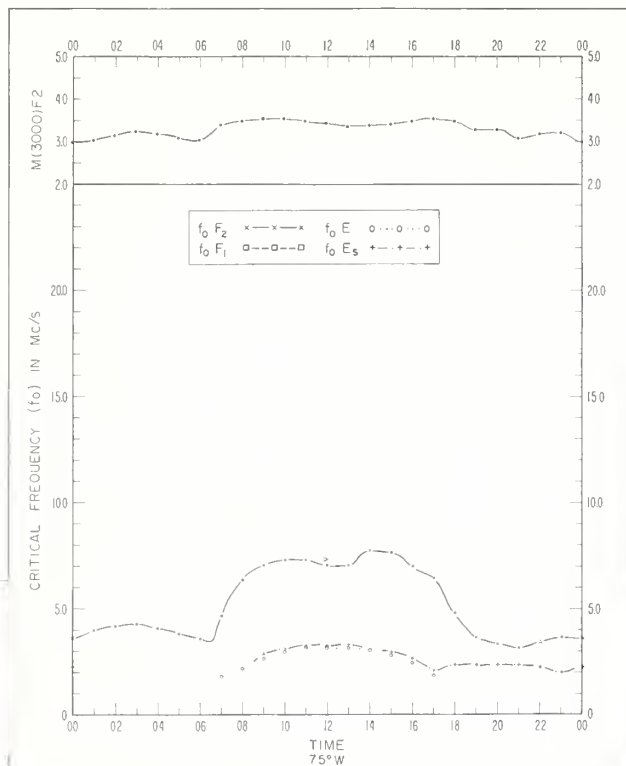


Fig 65 GRAND BAHAMA I
26 6°N, 78 2°W

DECEMBER 1961

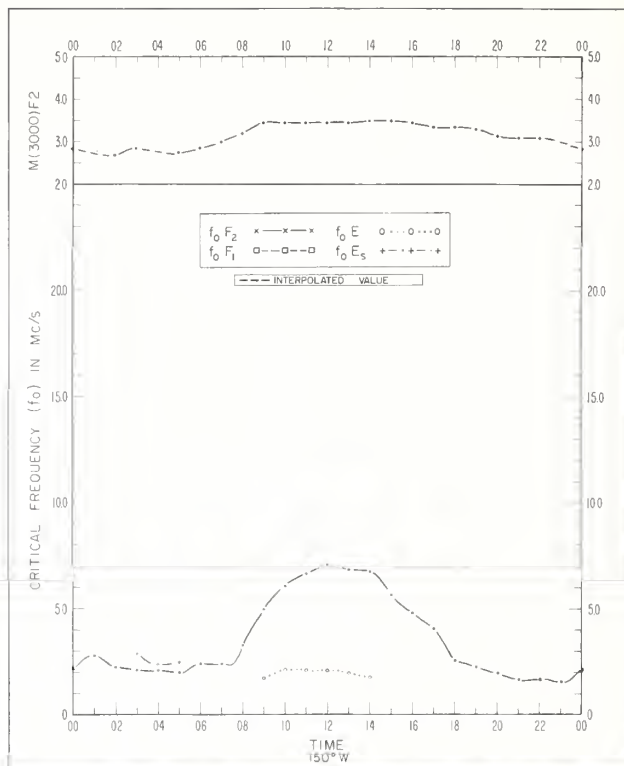


Fig 66 ANCHORAGE, ALASKA
61 2°N, 149 9°W

NOVEMBER 1961

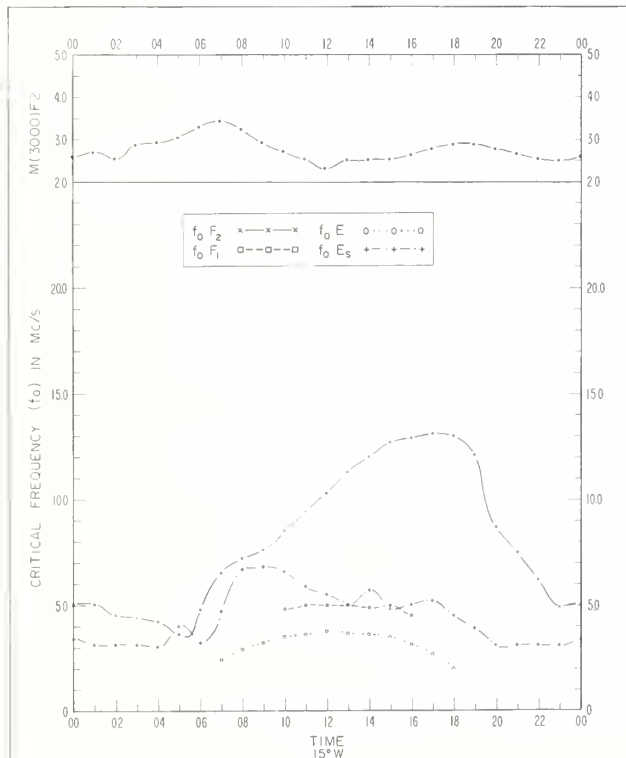


Fig 67 DAKAR, FRENCH W AFRICA
14 8°N, 17 4°W

AUGUST 1961

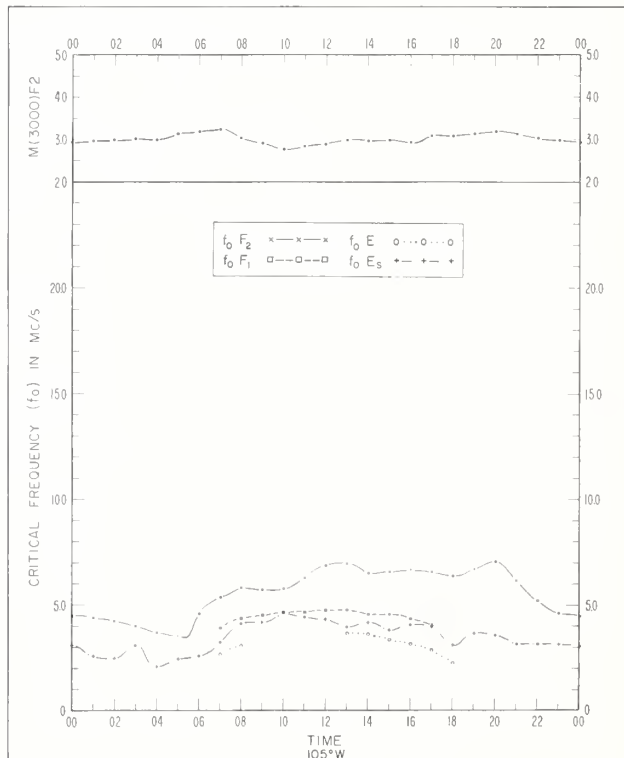


Fig 68 WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W

JULY 1961

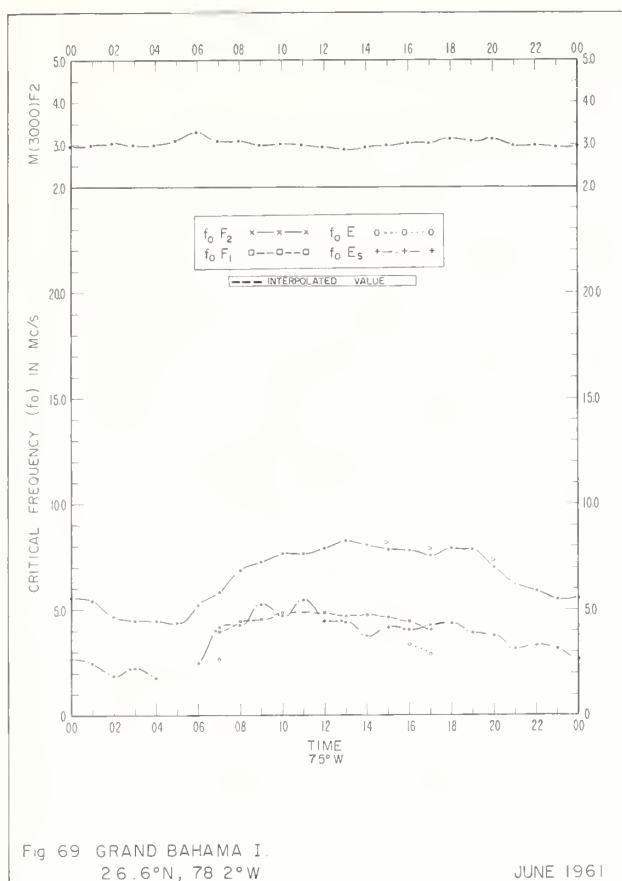


Fig 69 GRAND BAHAMA I.
26.6°N, 78.2°W

JUNE 1961

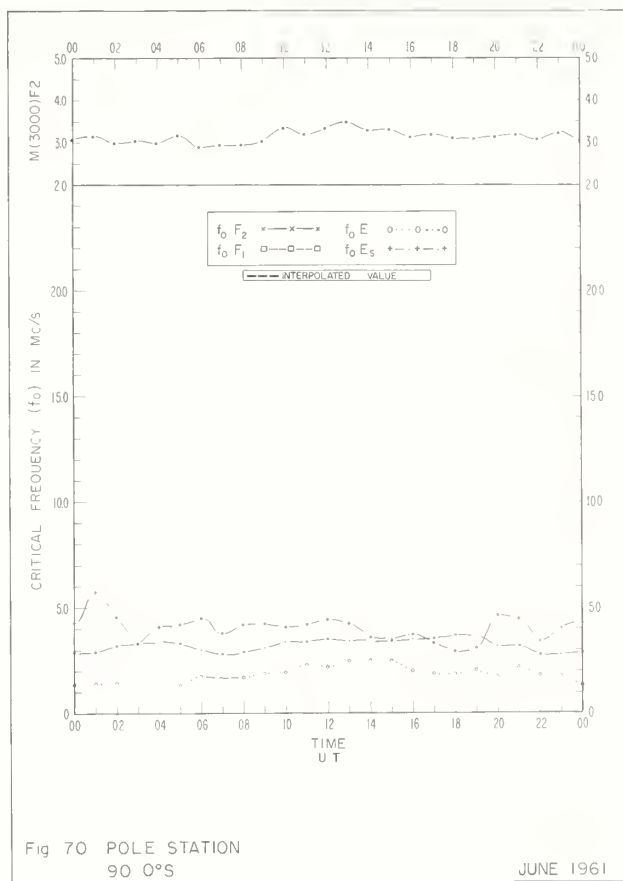


Fig 70 POLE STATION
90.0°S

JUNE 1961

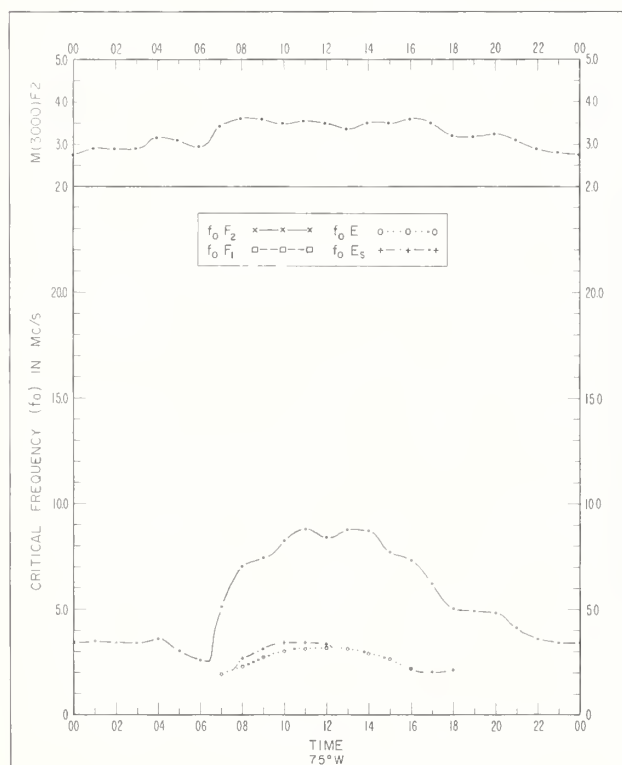


Fig. 71. CONCEPCION, CHILE
36.6°S, 73.0°W

MAY 1961

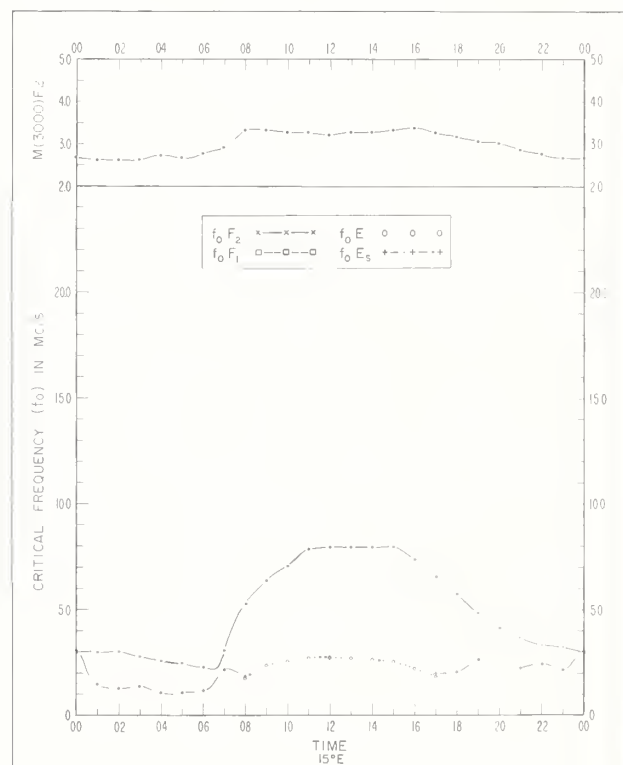
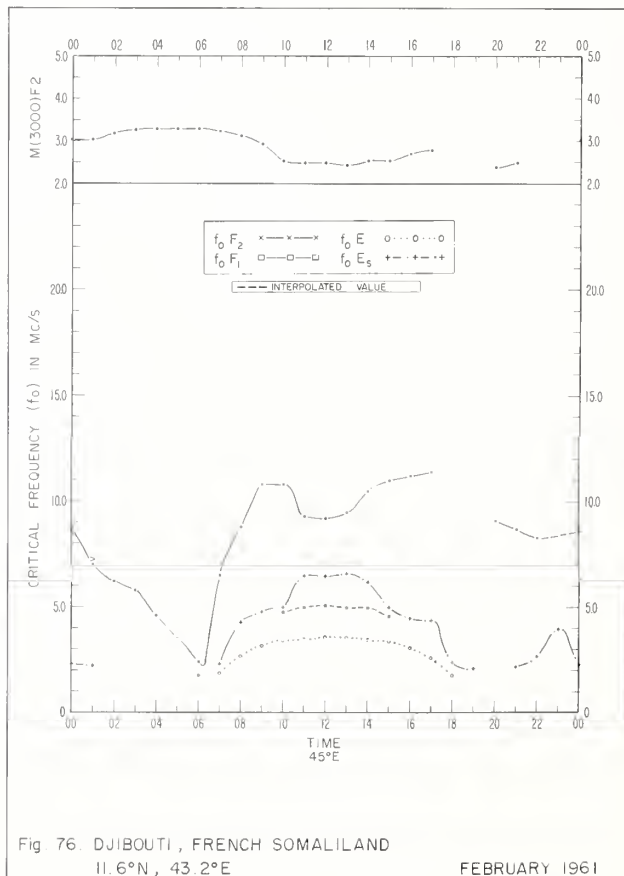
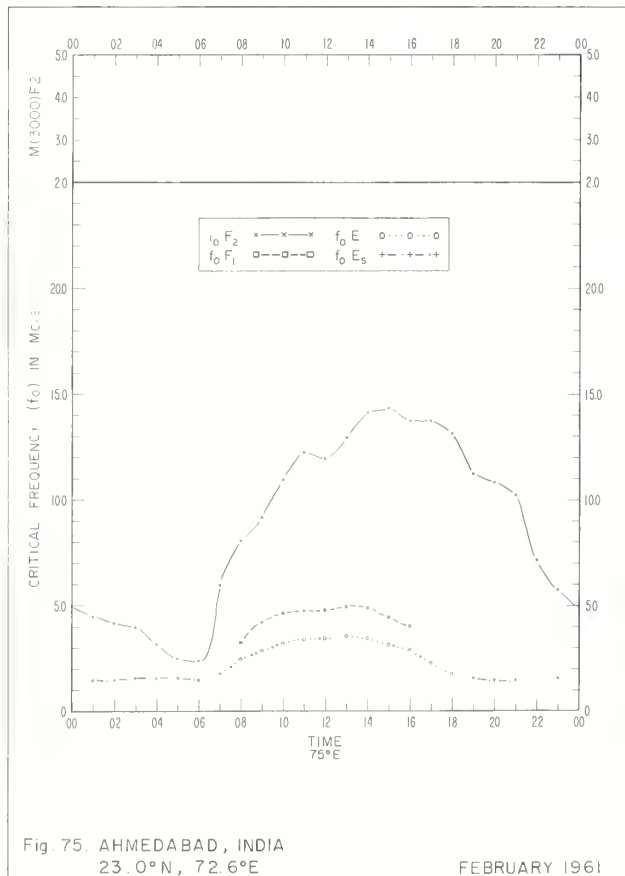
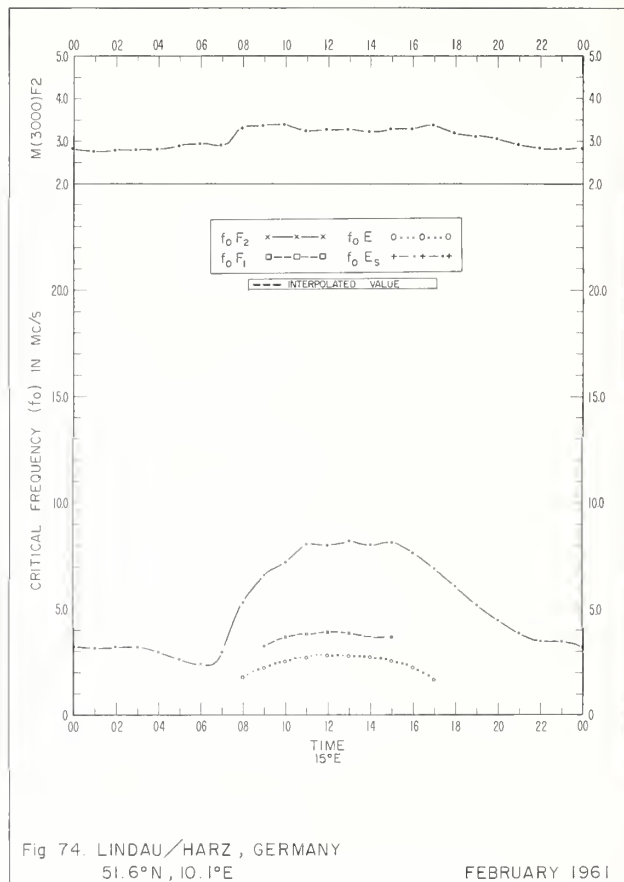
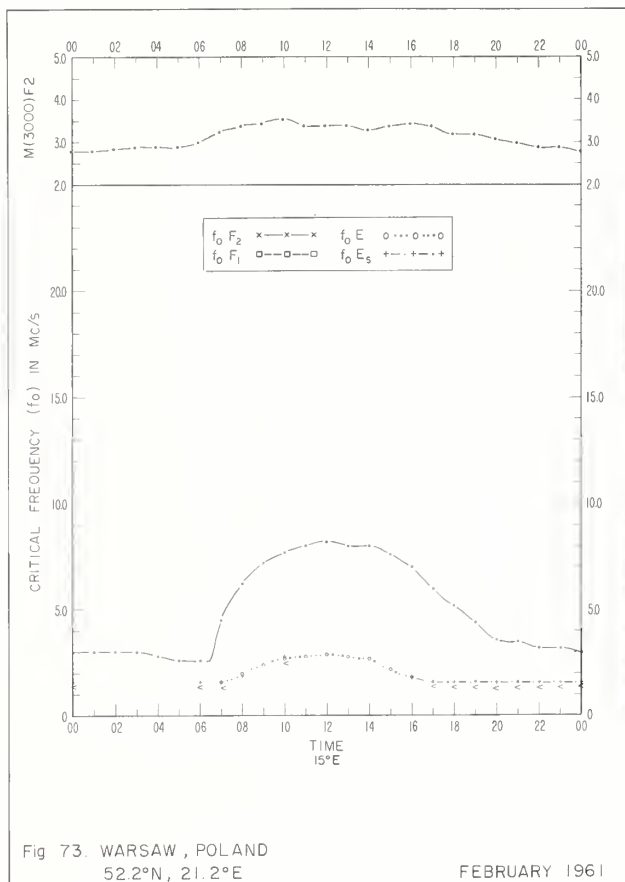
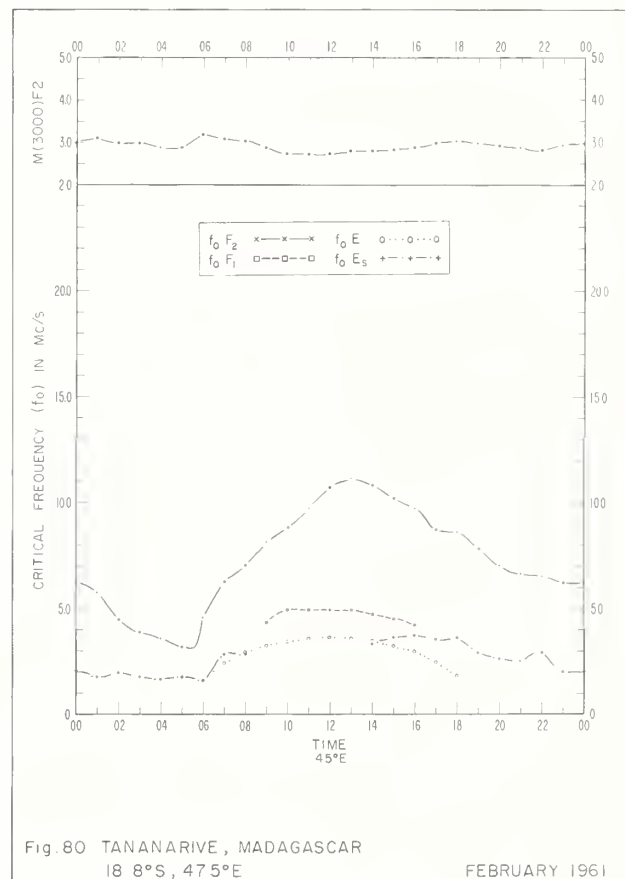
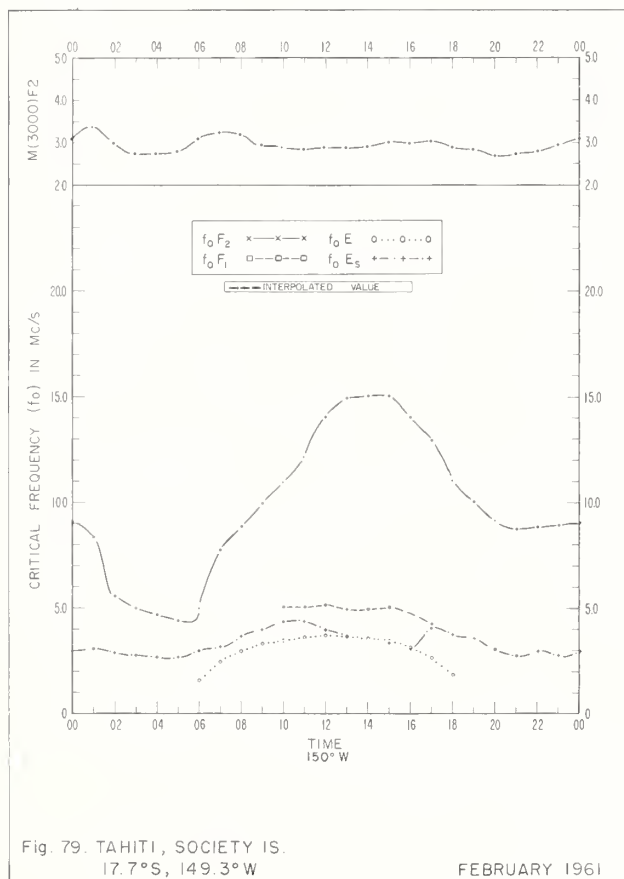
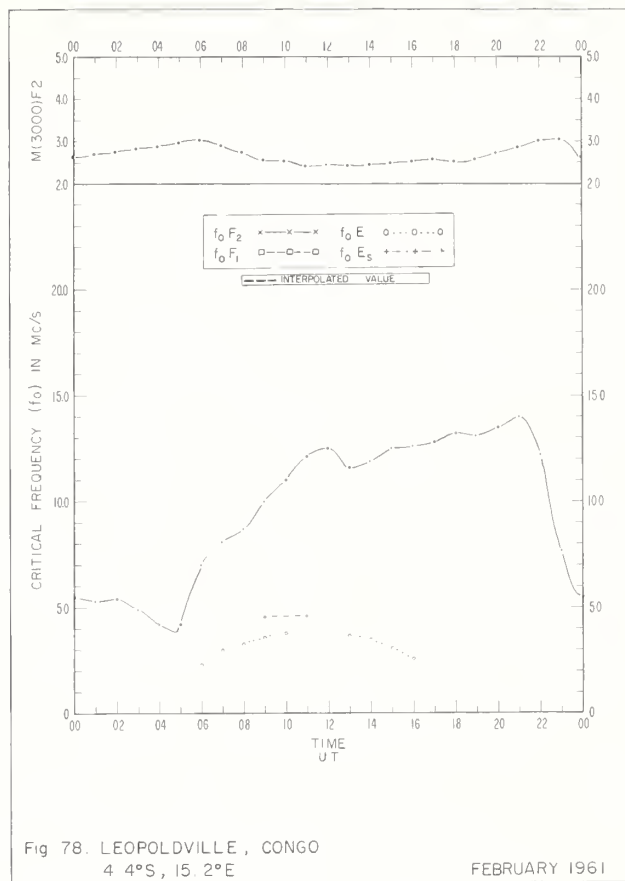
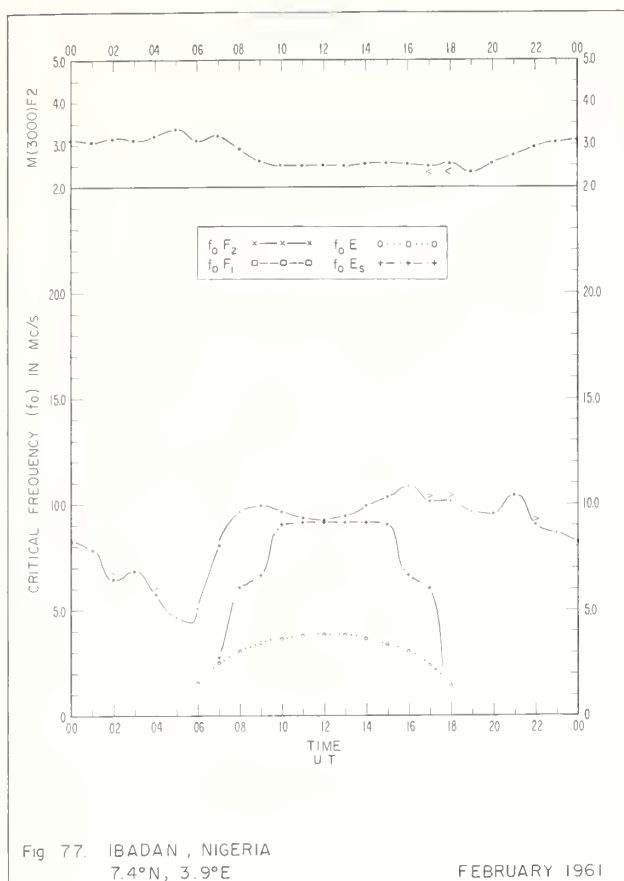
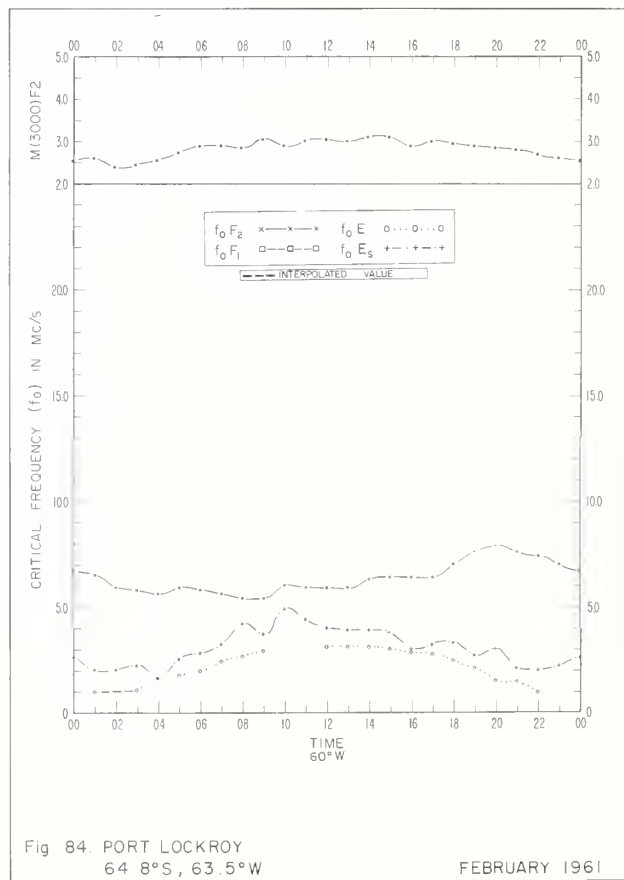
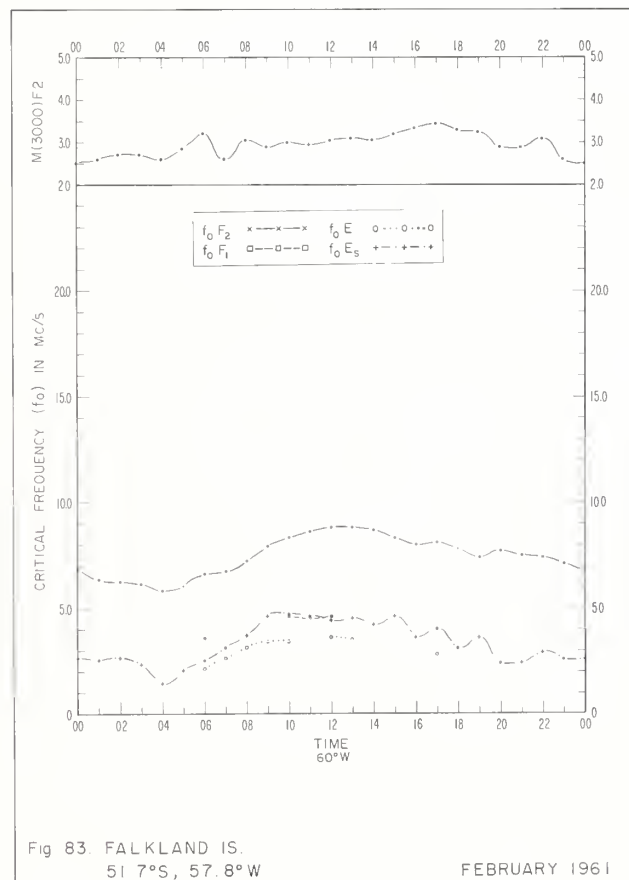
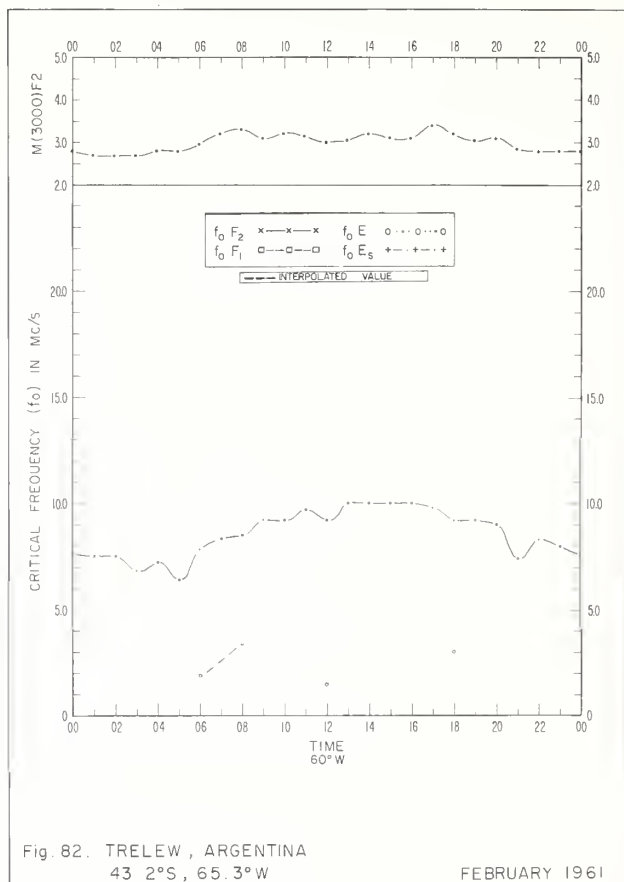
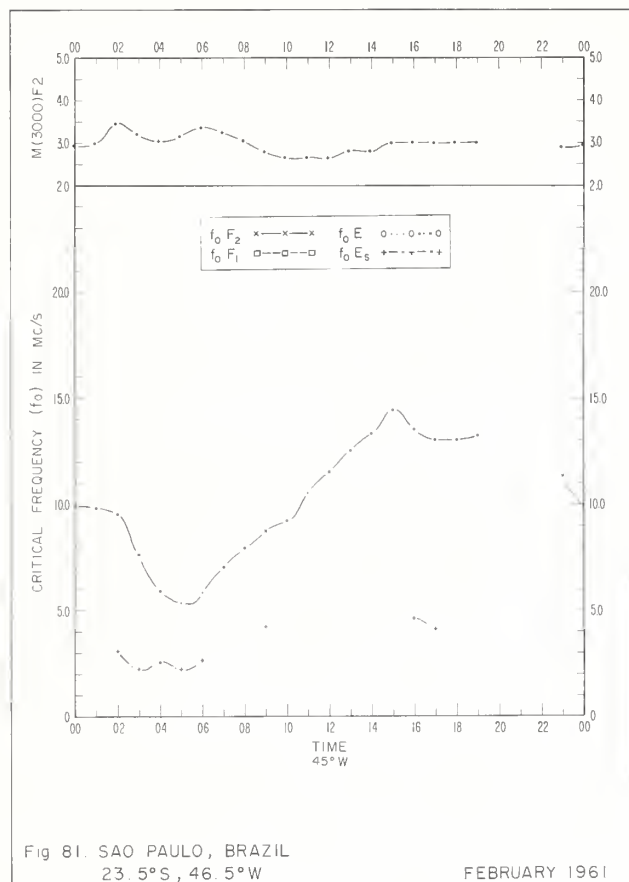


Fig. 72 JULIUSRUH/RUGEN, GERMANY
54.6°N, 13.4°E

FEBRUARY 1961







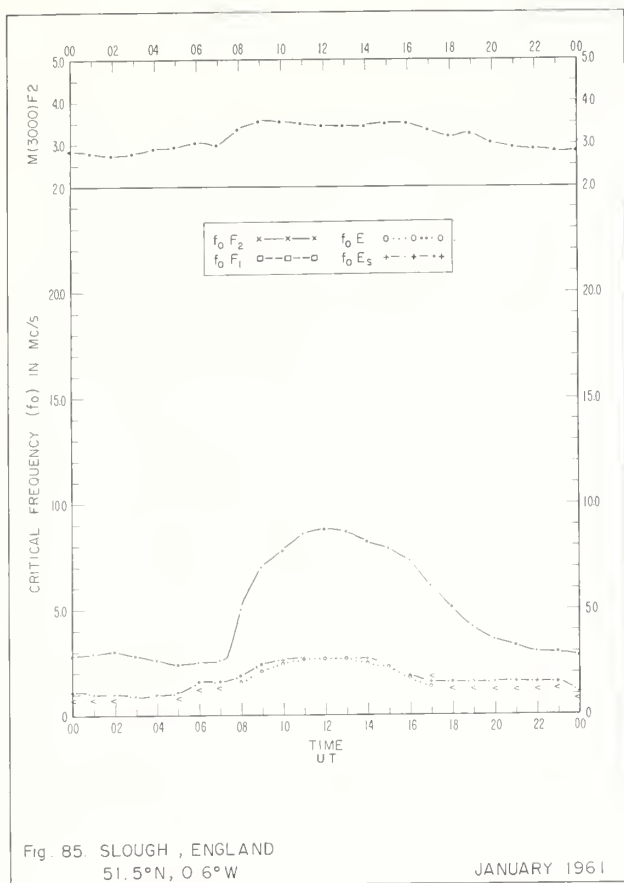


Fig. 85. SLOUGH, ENGLAND
51.5°N, 0°6'W

JANUARY 1961

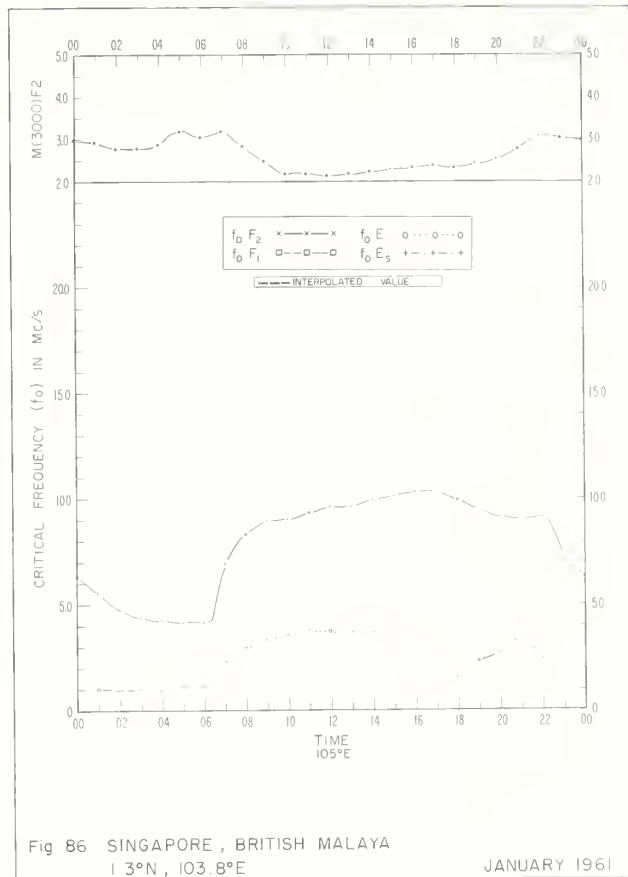


Fig. 86. SINGAPORE, BRITISH MALAYA
1°3'N, 103.8°E

JANUARY 1961

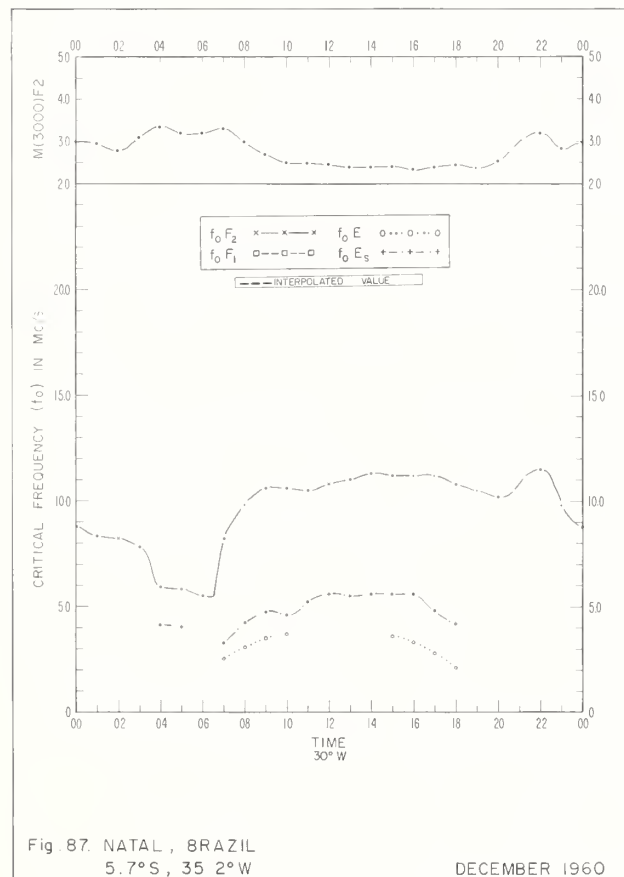


Fig. 87. NATAL, BRAZIL
5.7°S, 35°2'W

DECEMBER 1960

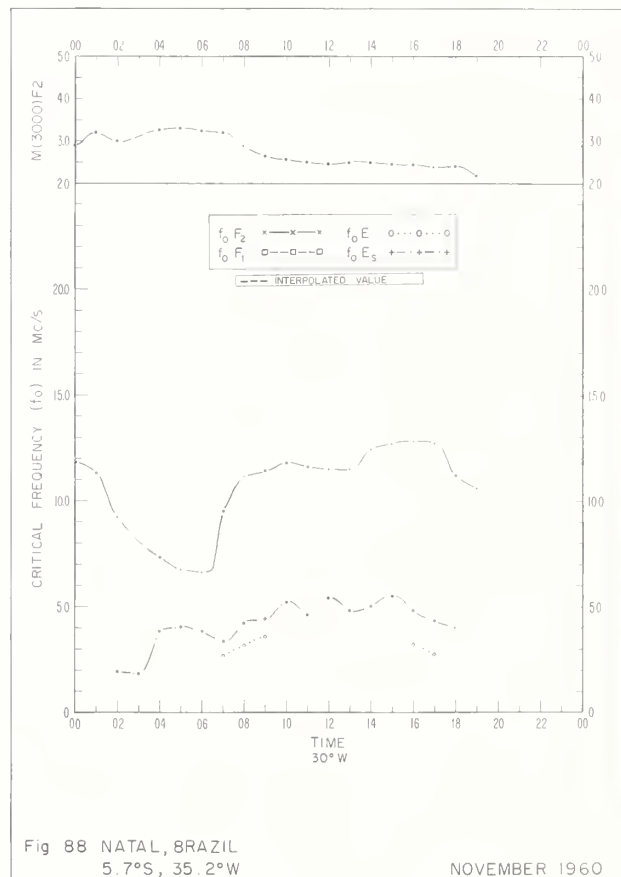
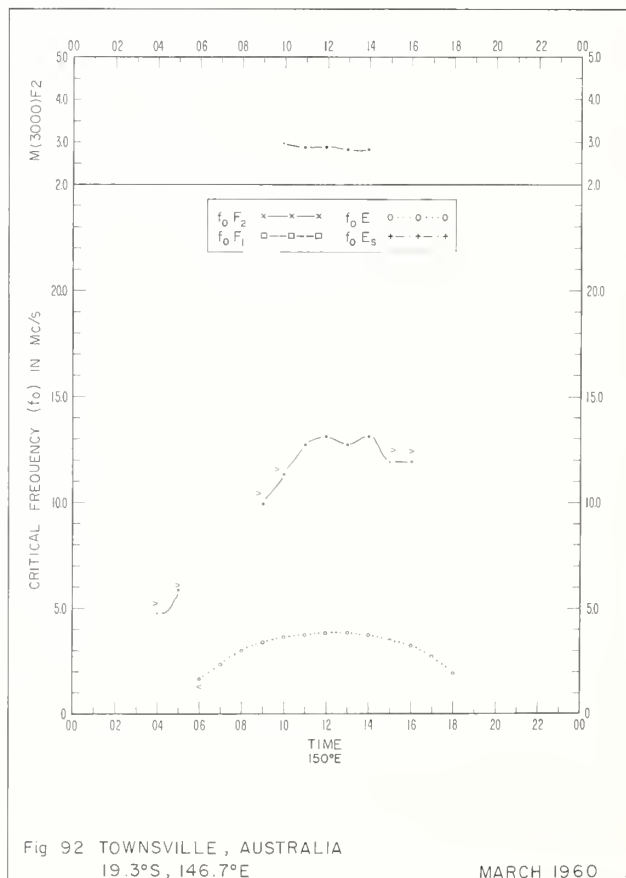
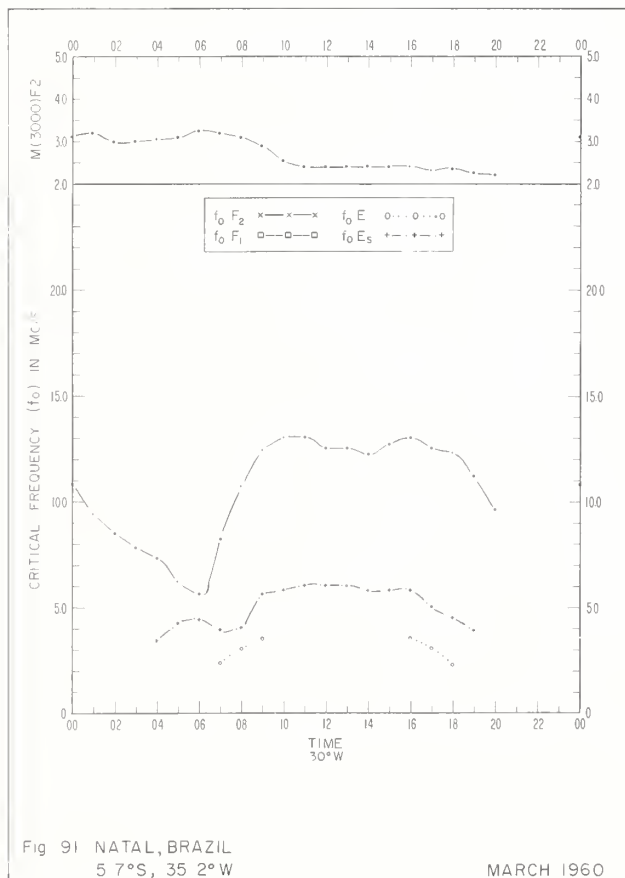
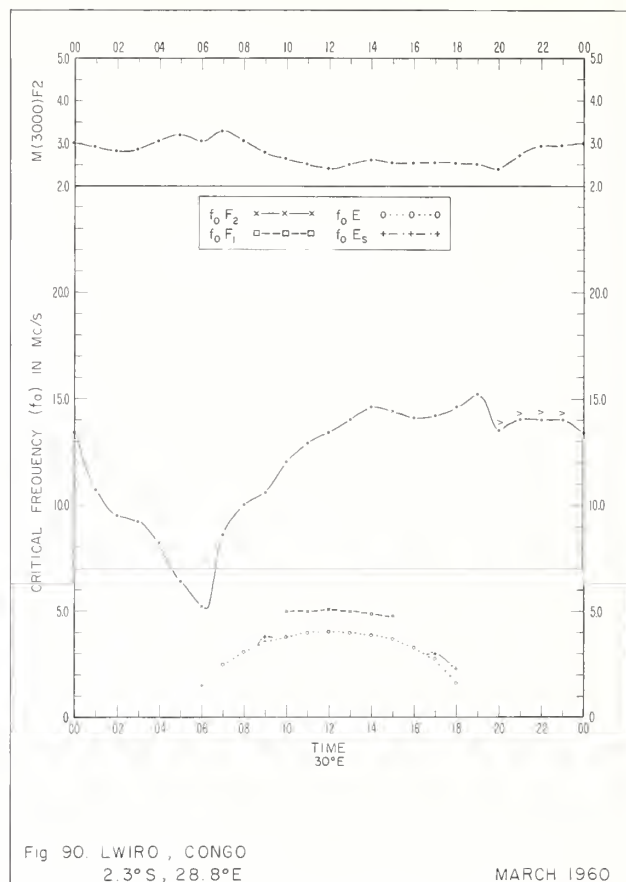
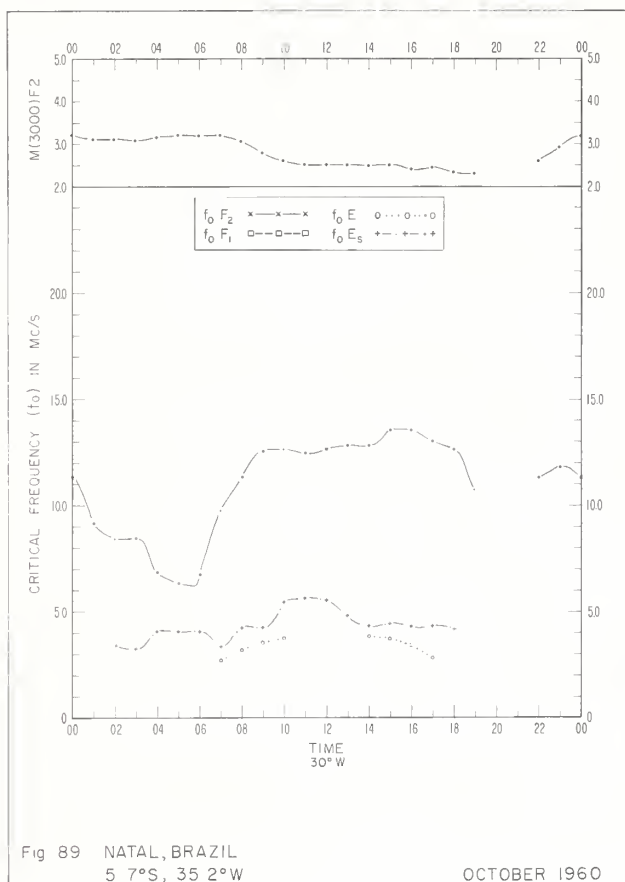


Fig. 88. NATAL, BRAZIL
5.7°S, 35°2'W

NOVEMBER 1960



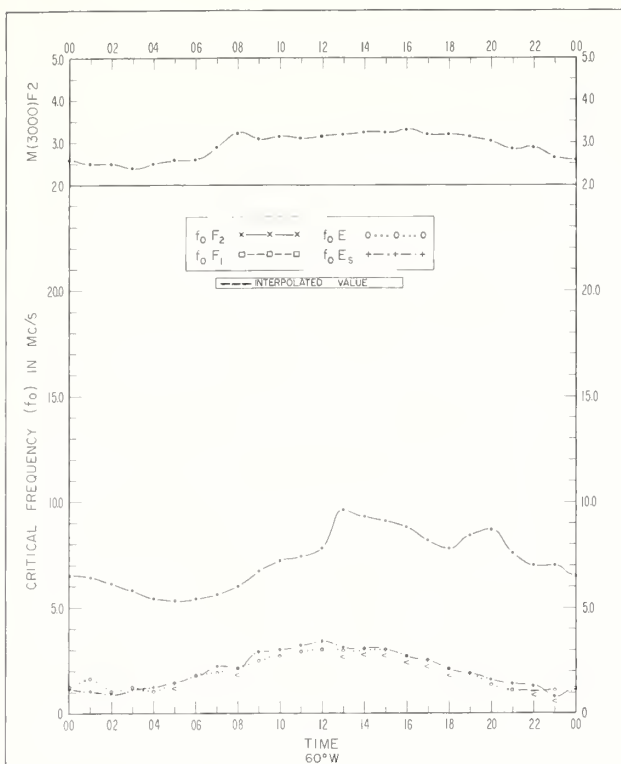


Fig. 93 PORT LOCKROY
64.8°S, 63.5°W

MARCH 1960

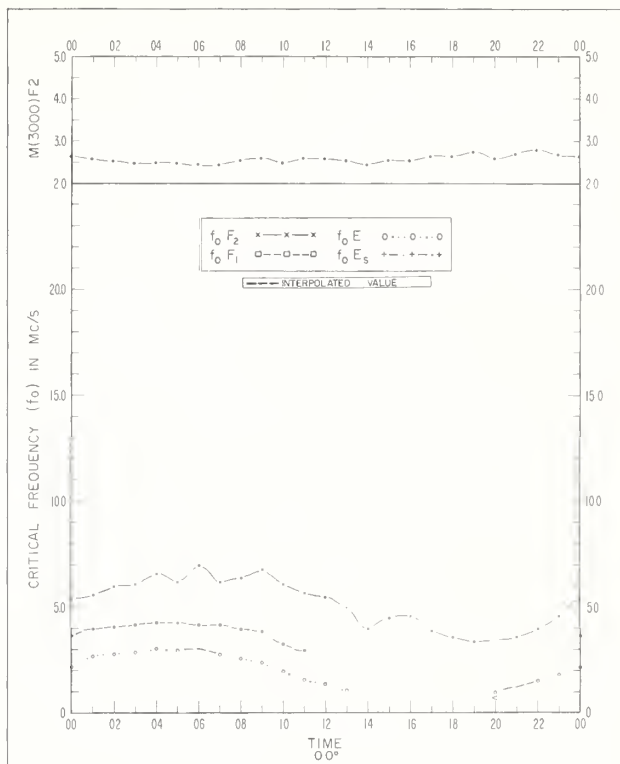


Fig. 94 WILKES STATION
66.3°S, 110.5°E

MARCH 1960

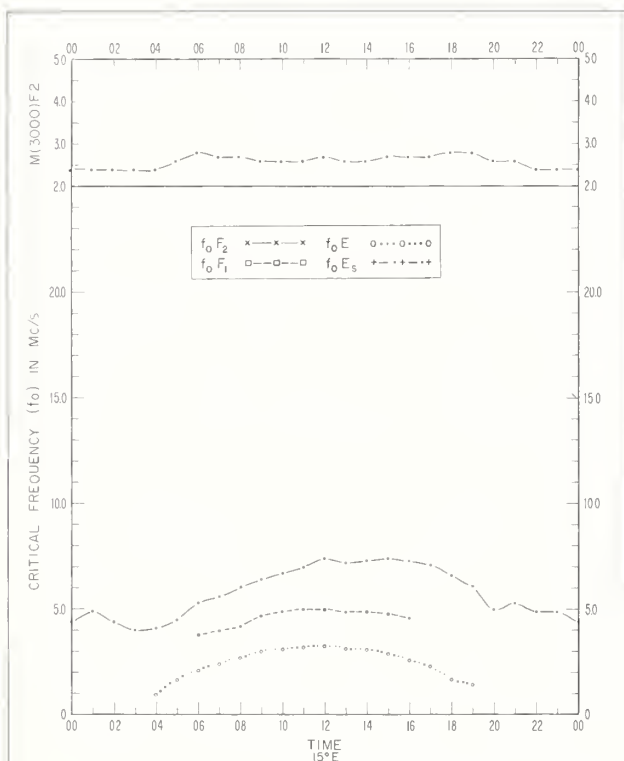


Fig. 95 LYCKSELE, SWEDEN
64.6°N, 18.8°E

SEPTEMBER 1959

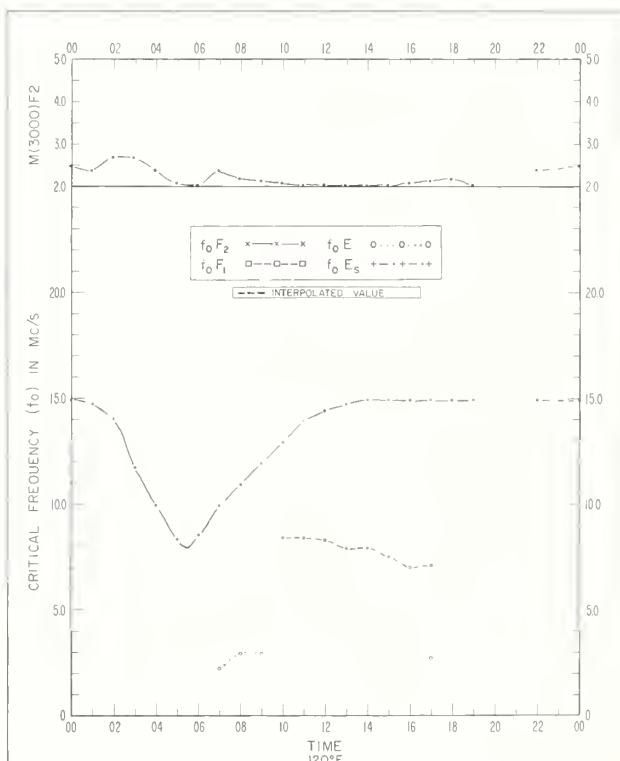
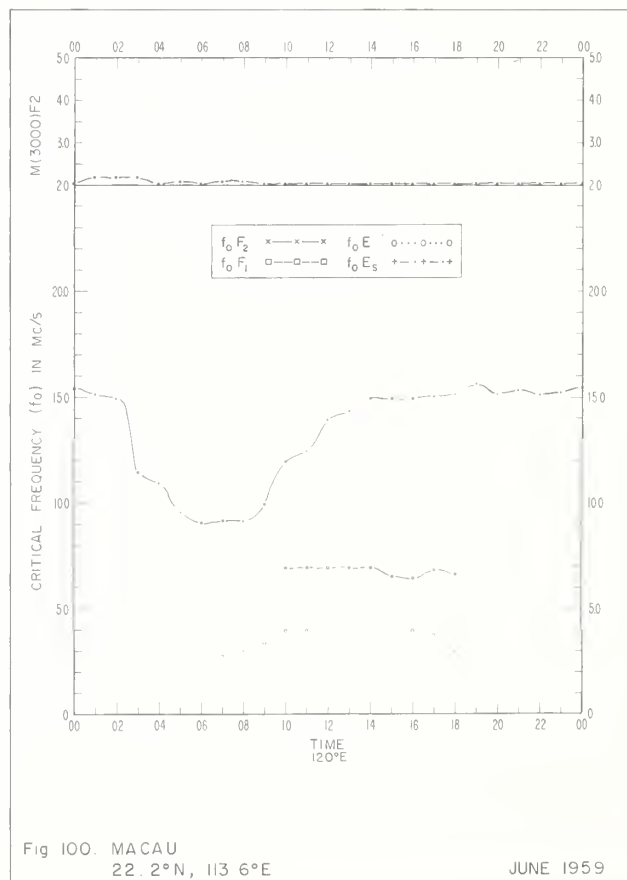
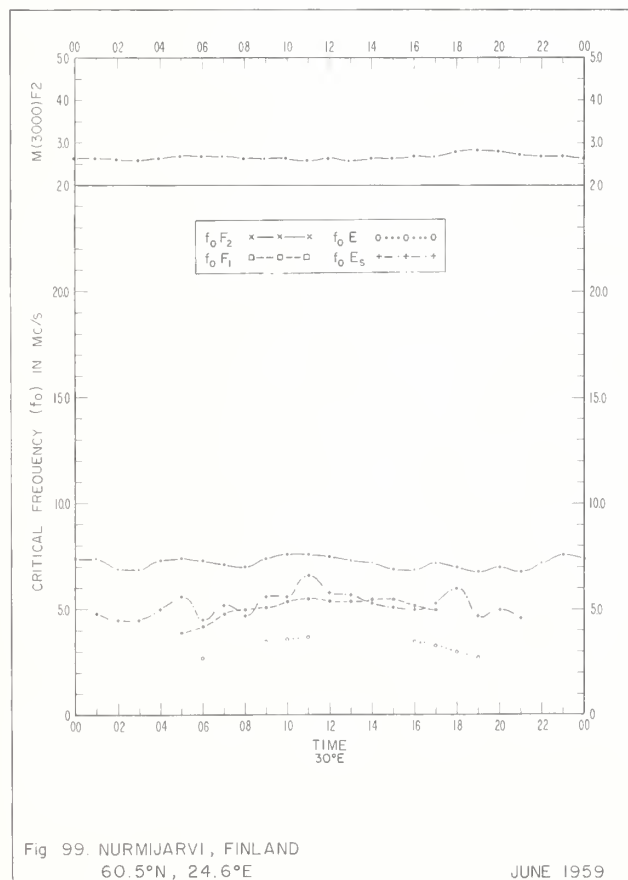
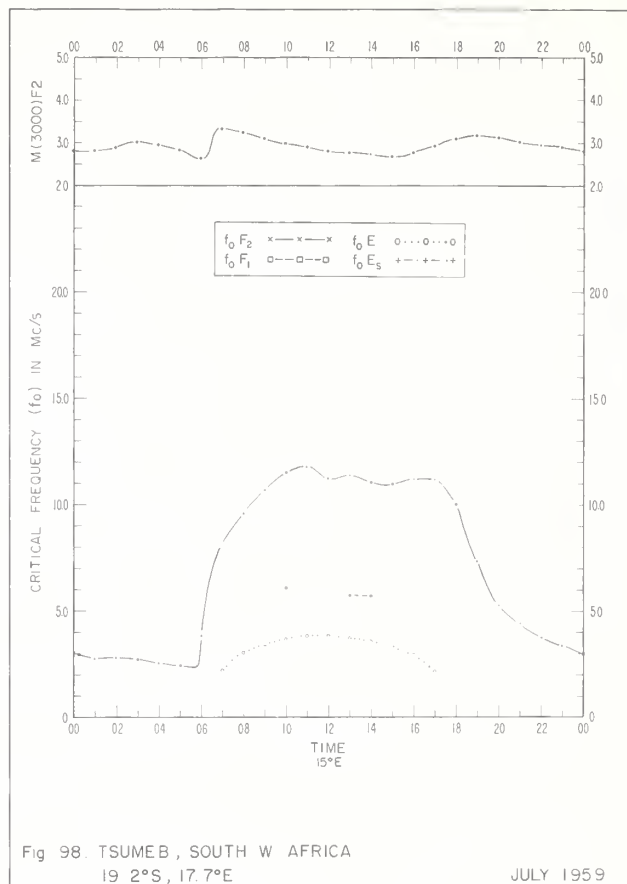
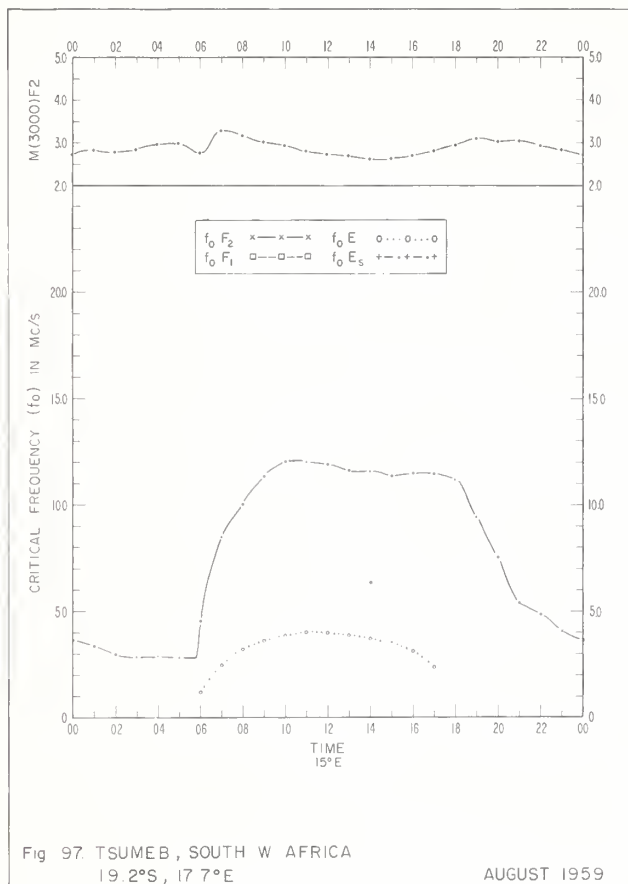


Fig. 96 MACAU
22.2°N, 113.6°E

SEPTEMBER 1959



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